

FIG. 1

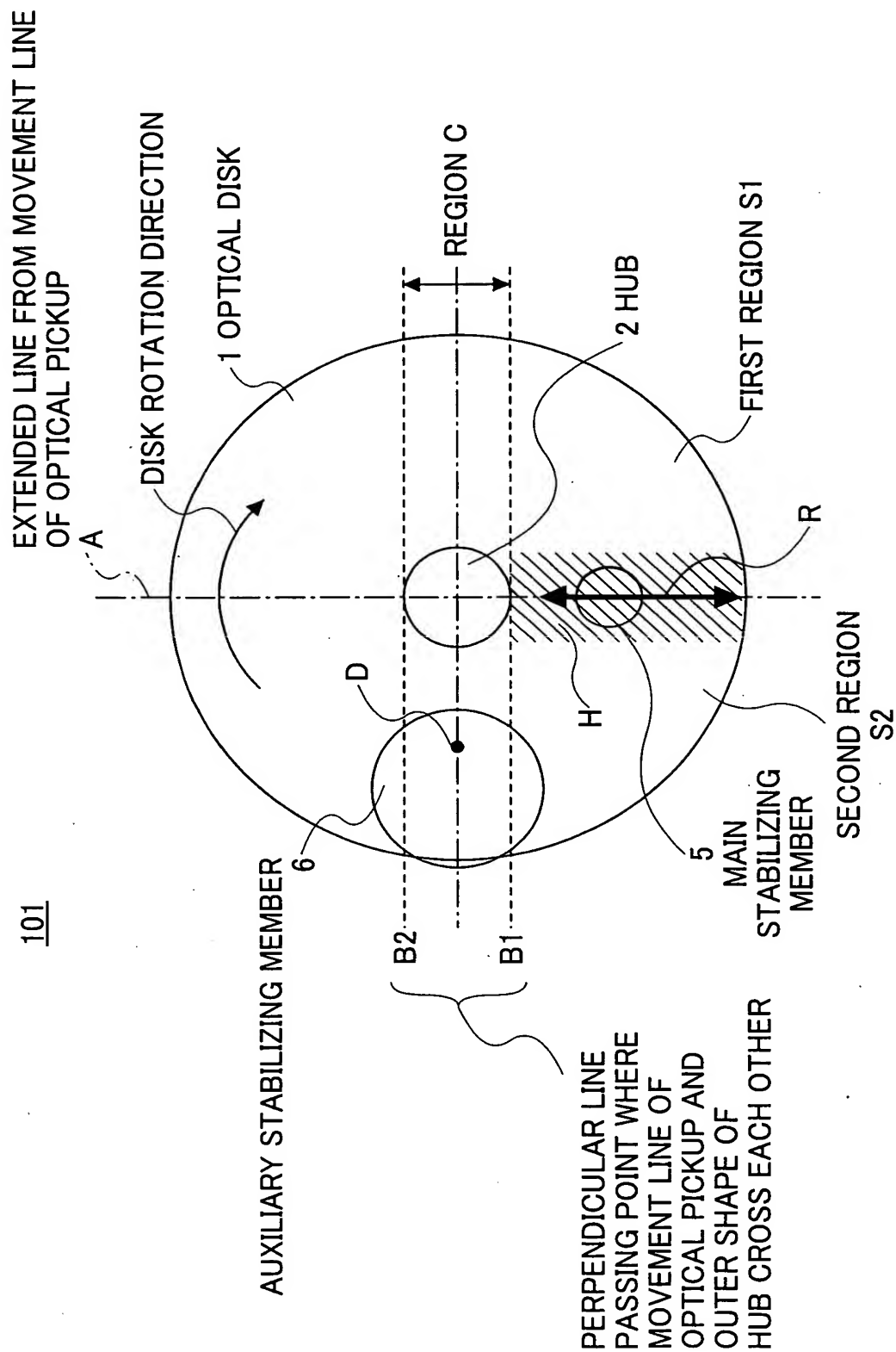


FIG.2

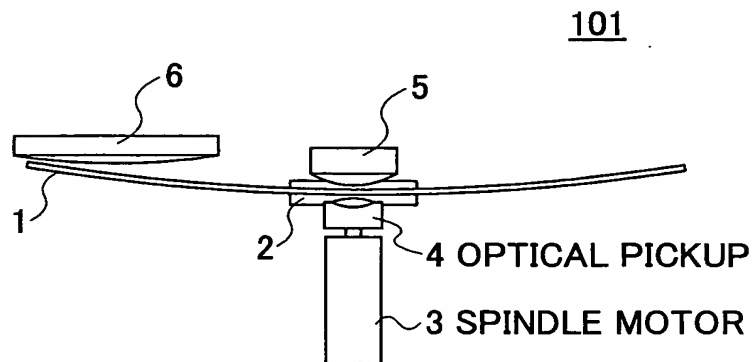


FIG.3

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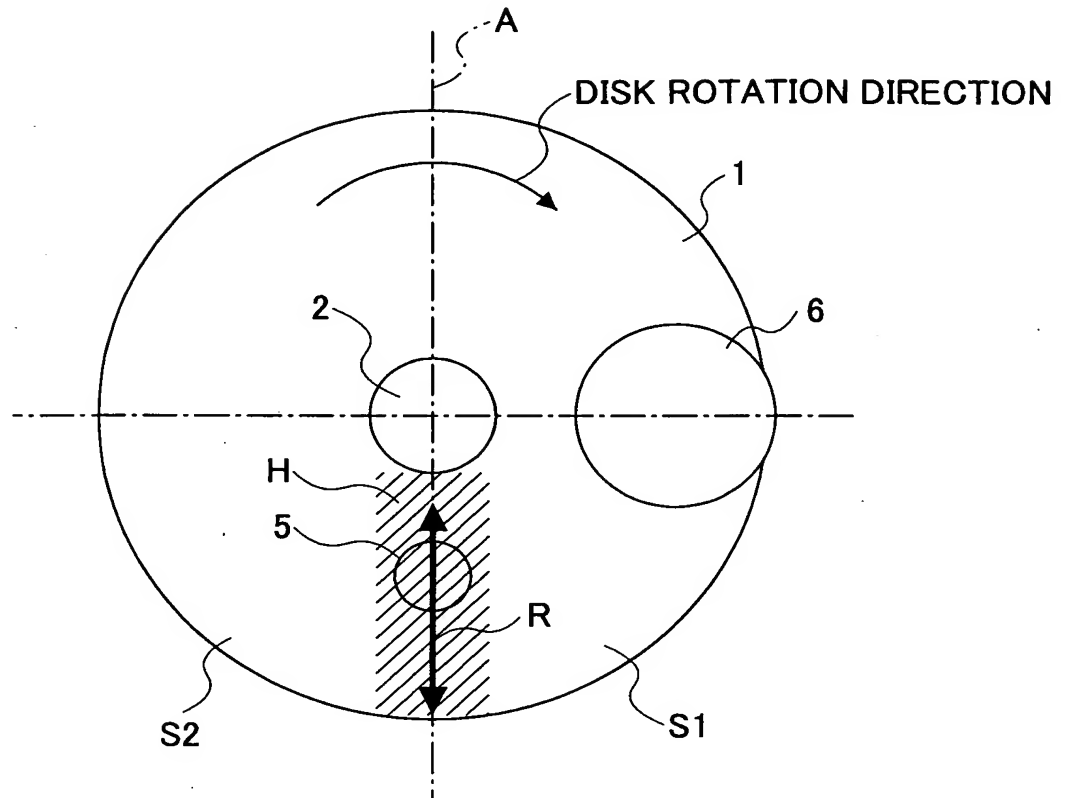


FIG.4

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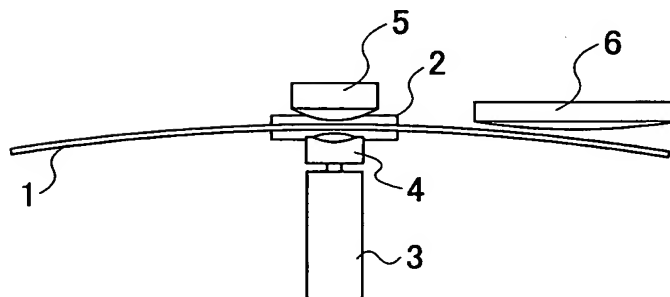


FIG.5

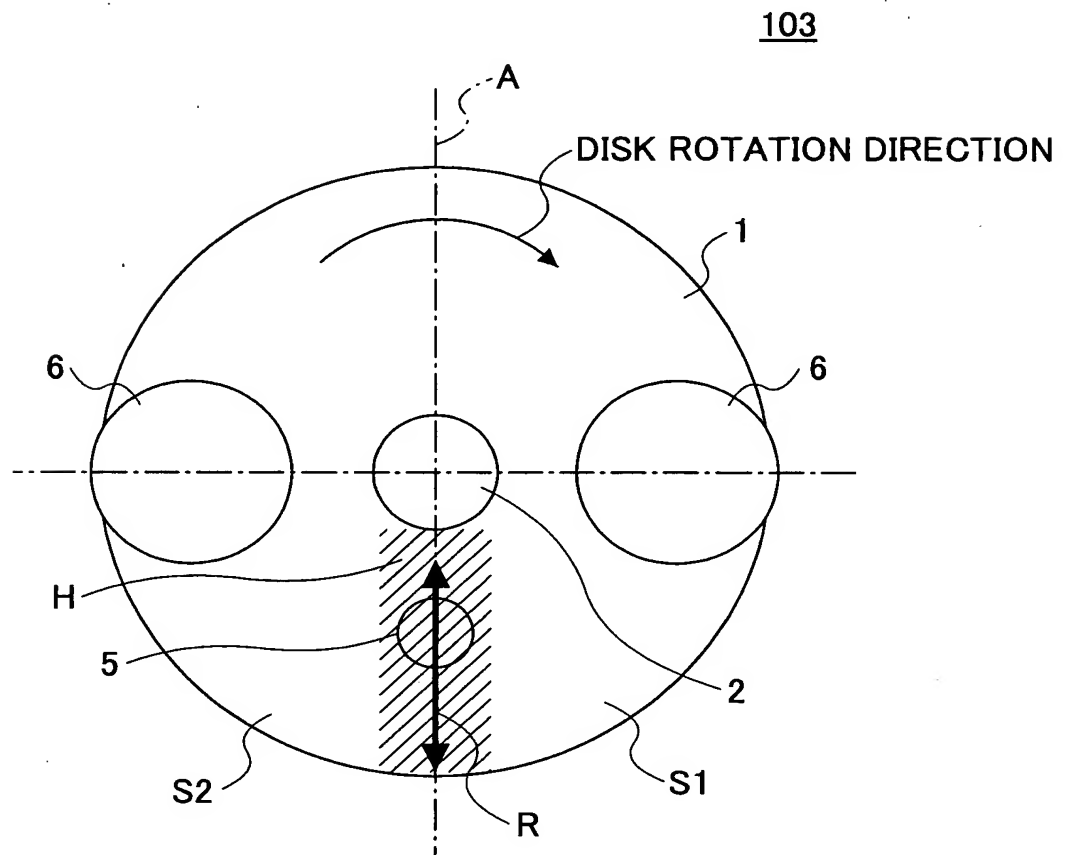


FIG.6

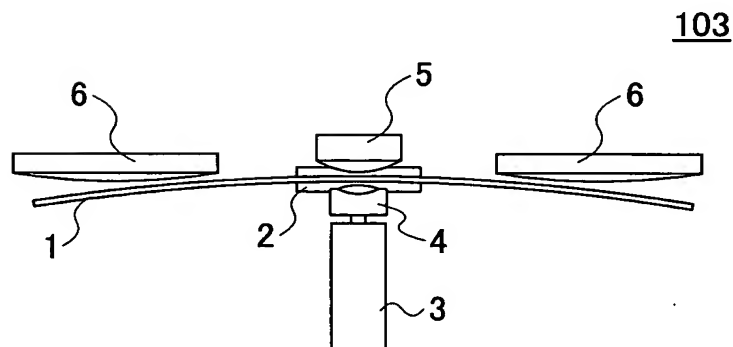


FIG.7

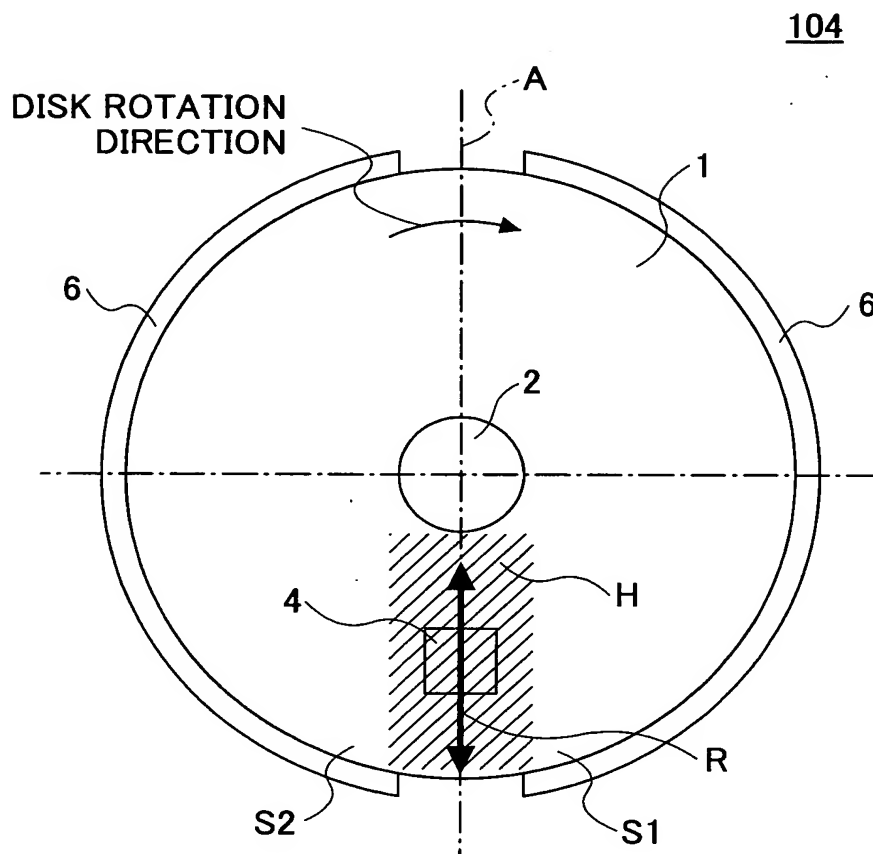


FIG.8

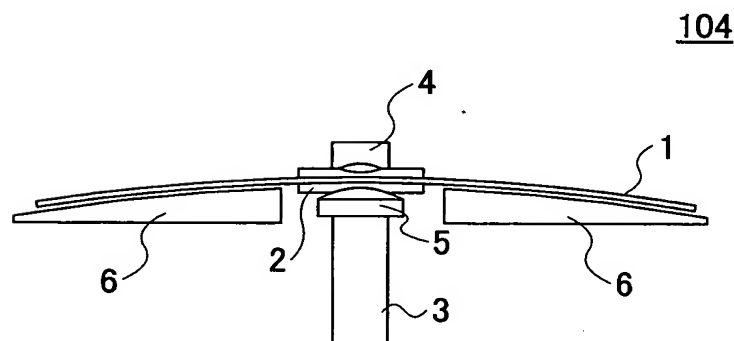


FIG. 9

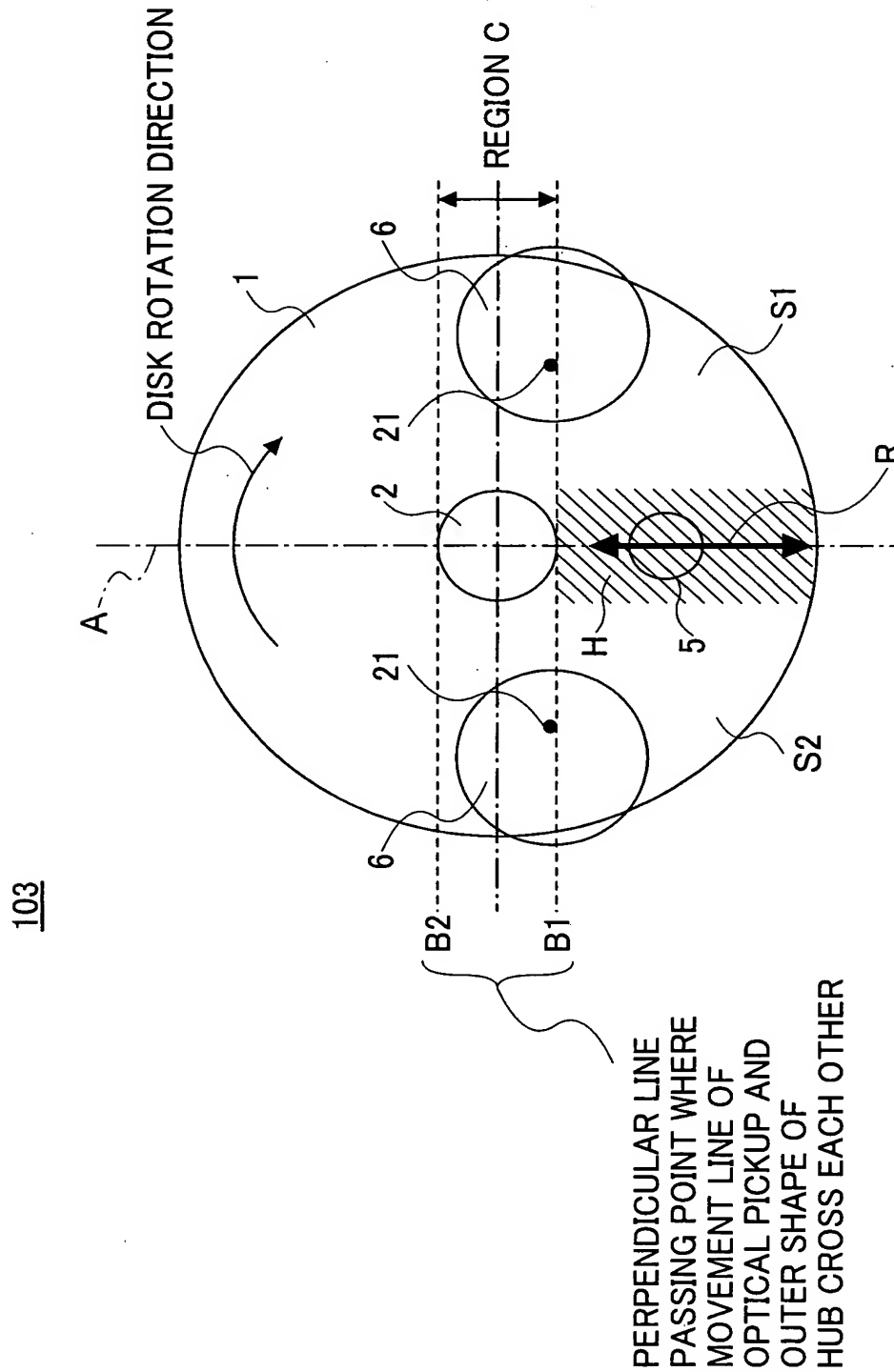


FIG.10

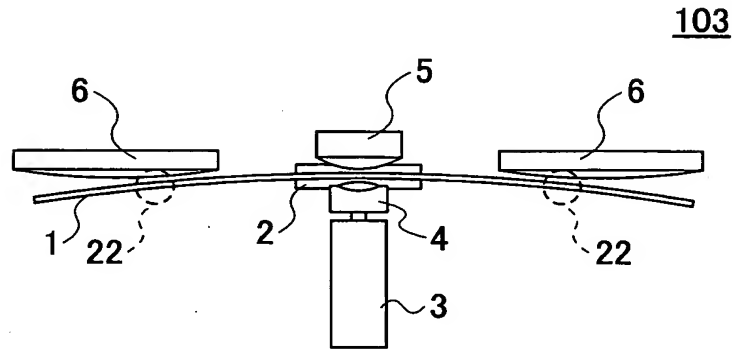


FIG.11

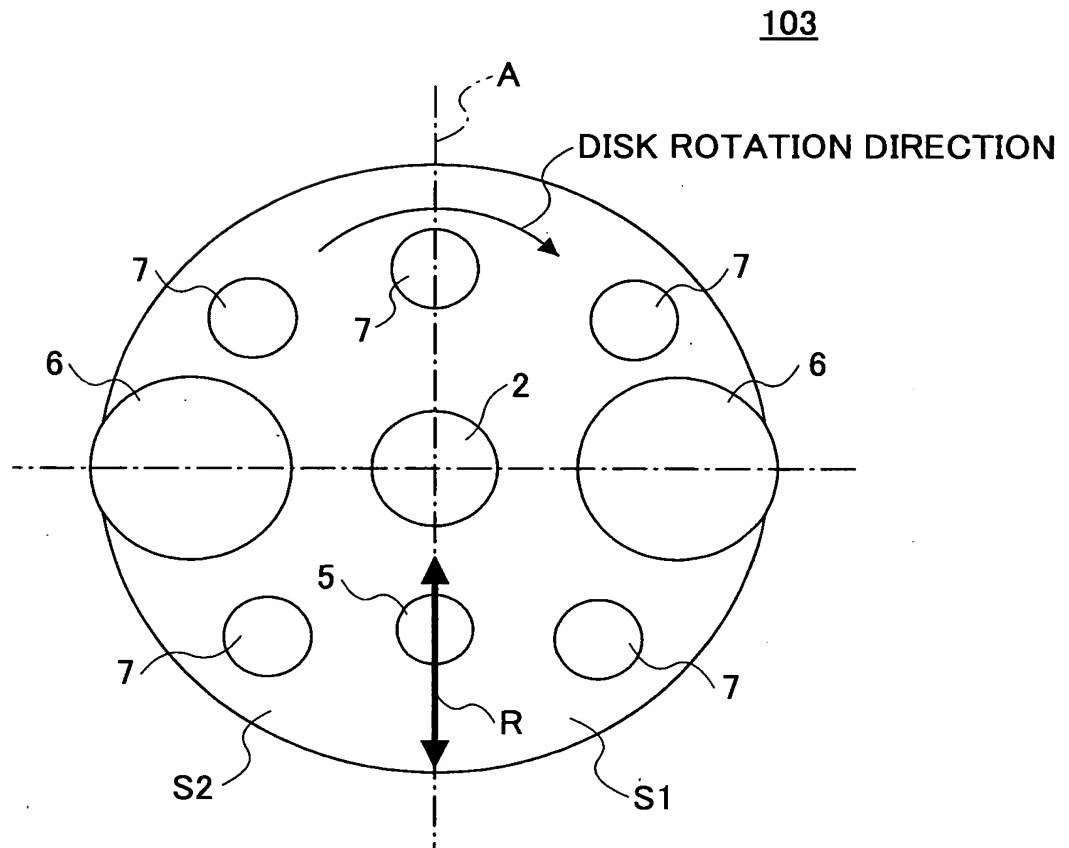


FIG.12

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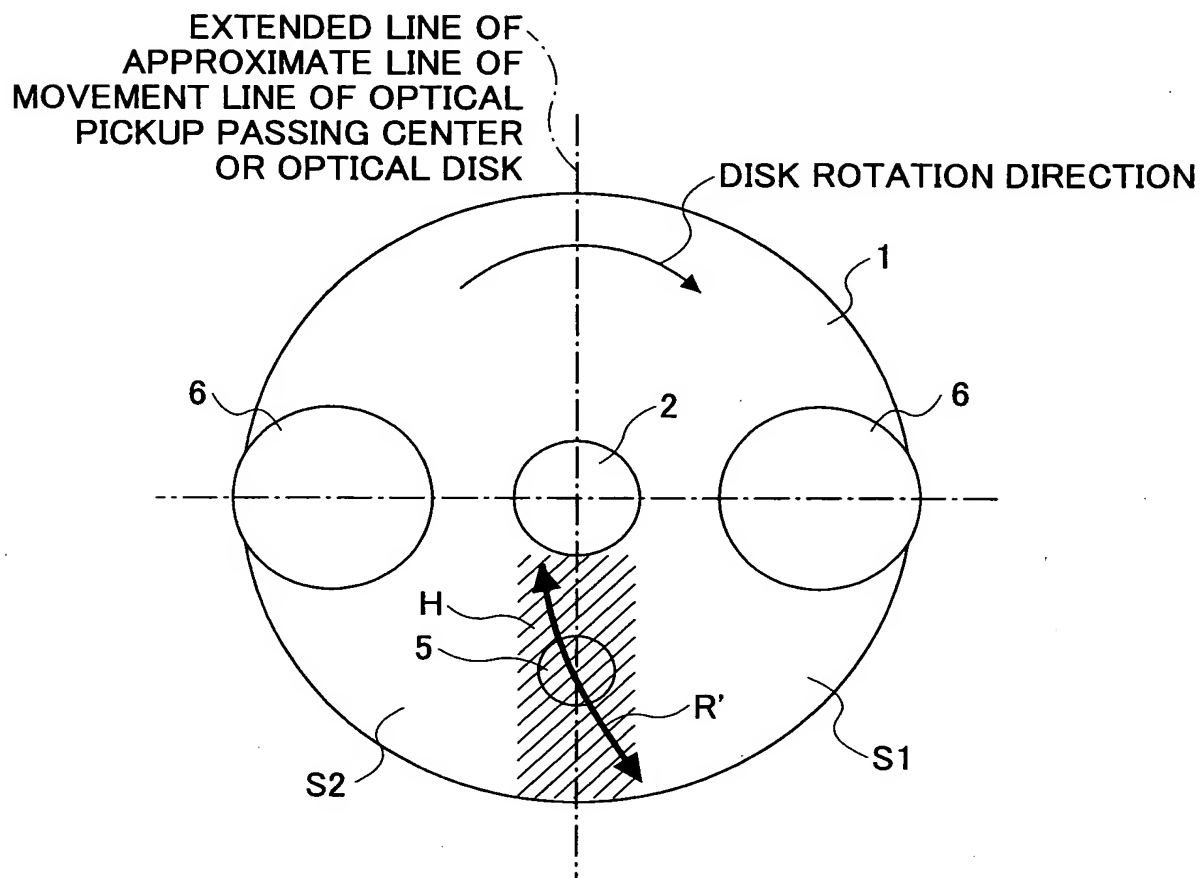


FIG.13

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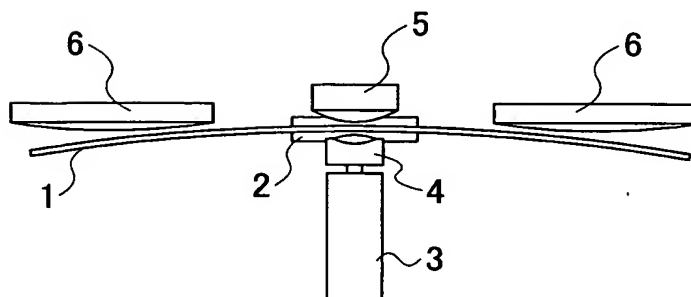


FIG.14

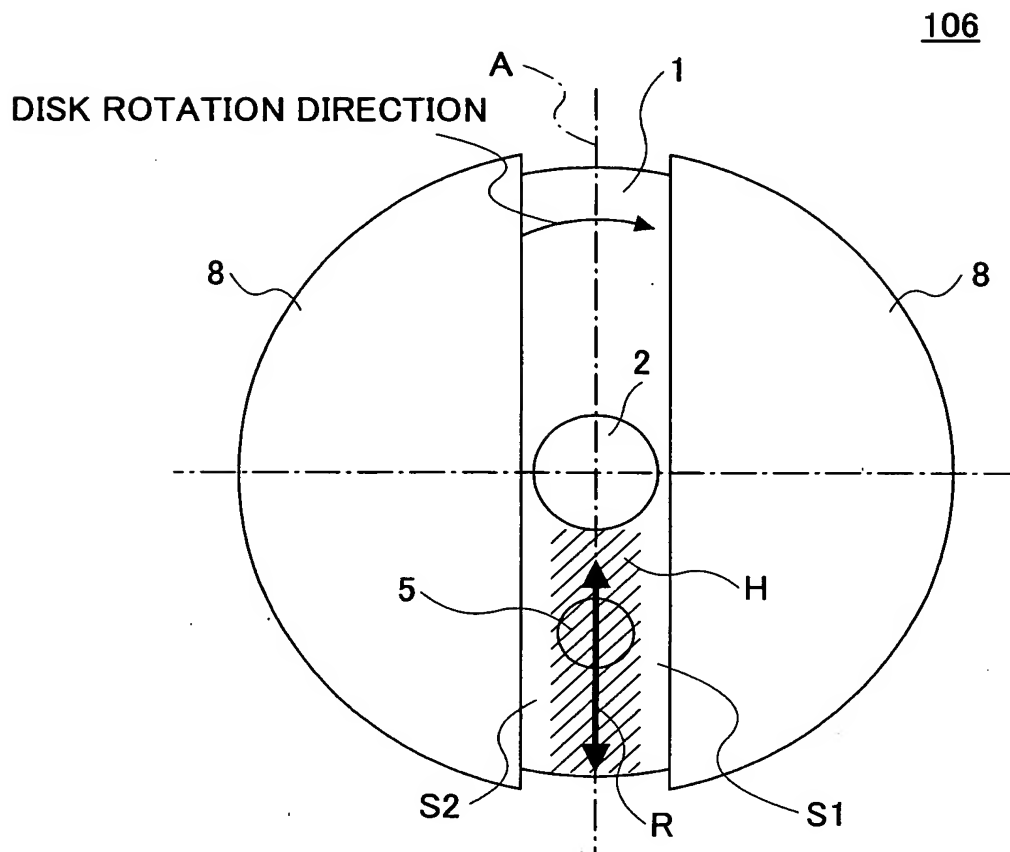


FIG.15

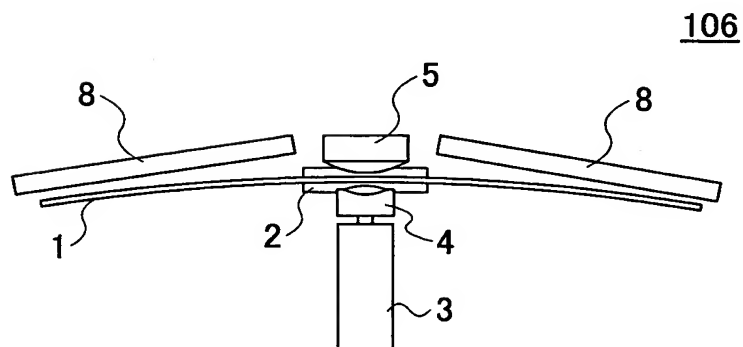


FIG.16

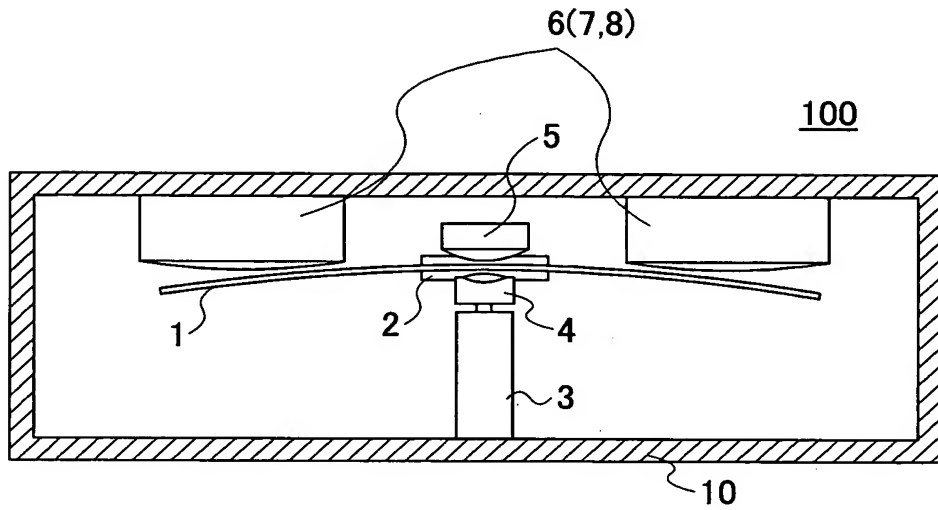


FIG.17

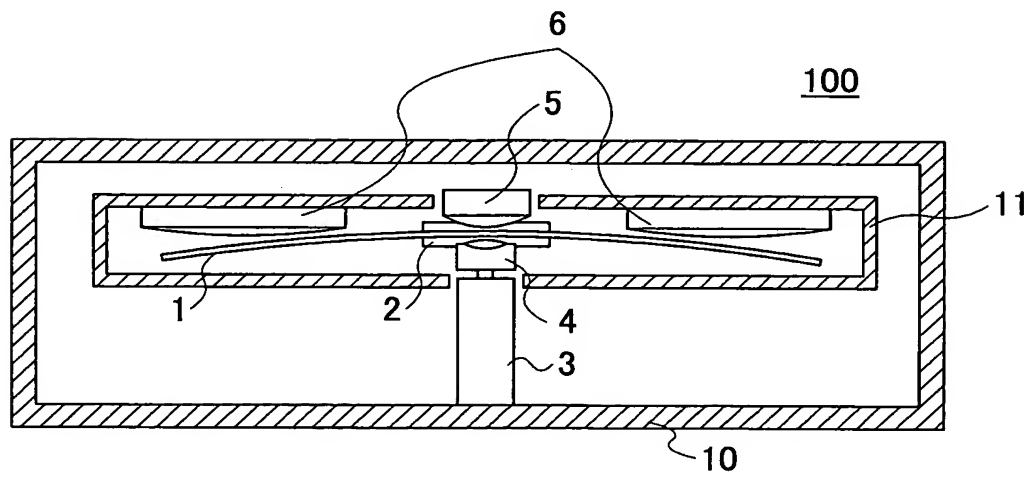


FIG.18

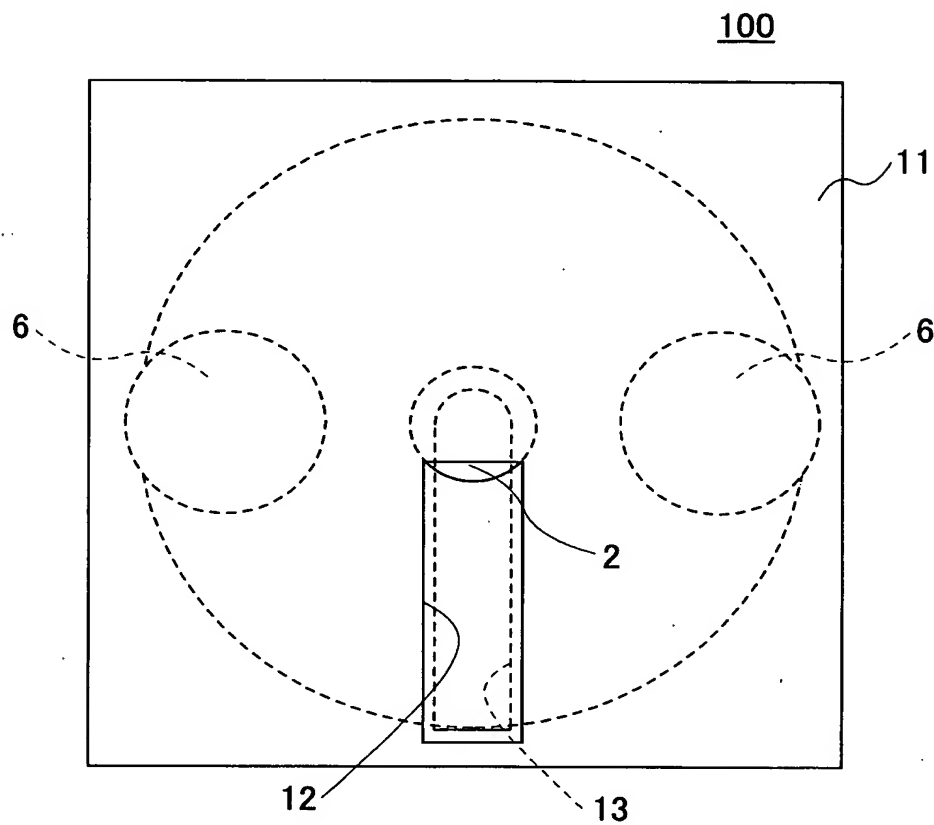


FIG.19

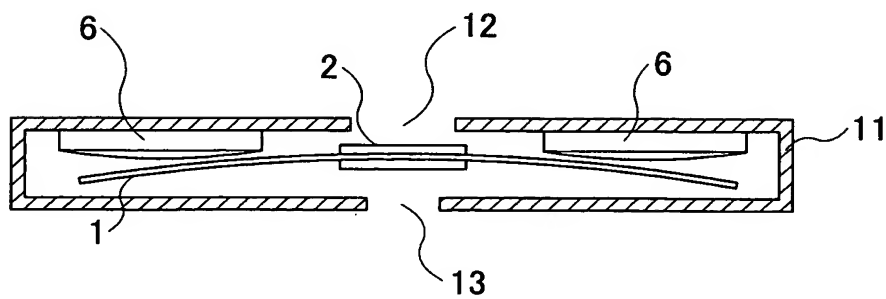


FIG.20

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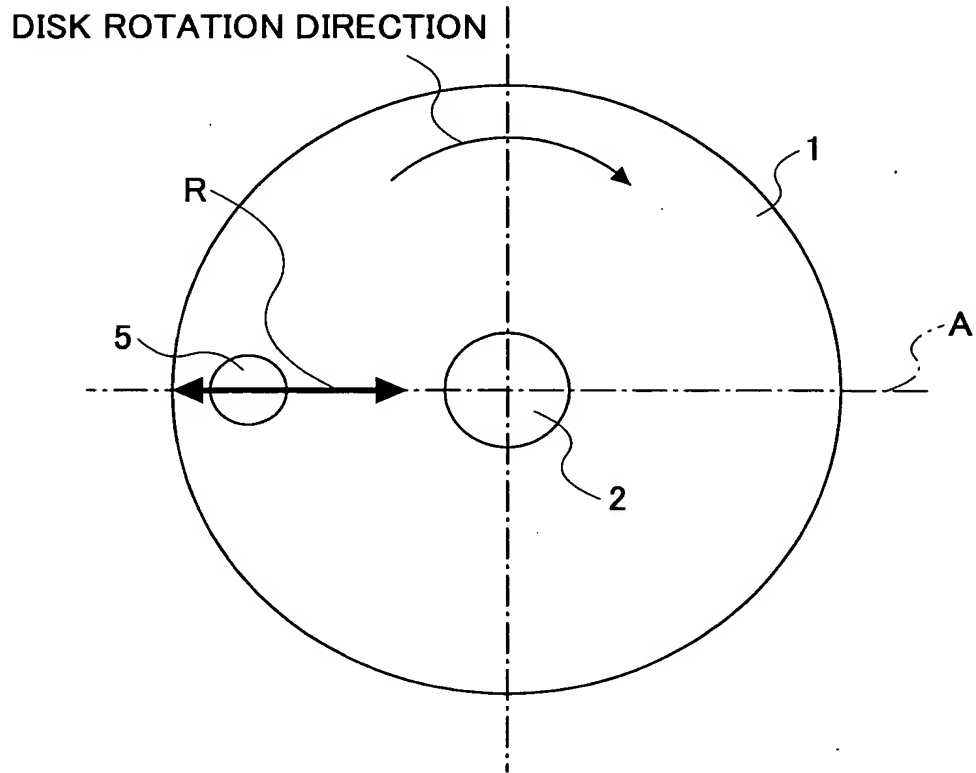


FIG.21

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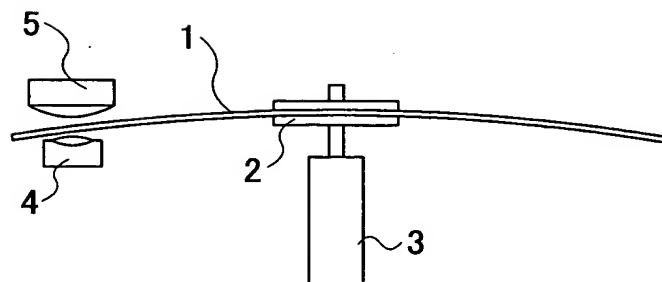


FIG.22

	LINEAR SPEED [m/sec]	REQUIRED PUSHING AMOUNT OF MAIN STABILIZING MEMBER TO REDUCE SIDE-RUNOUT LOWER THAN 10 MICRON (AT LOCATION OF r55mm)	SIDE-RUNOUT BY PUSHING AMOUNT [μ m]
EXAMPLE 1-1	5	0.20	10.0
	15	0.15	10.0
	30	0.10	10.0
EXAMPLE 1-2	5	0.20	10.0
	15	0.15	10.0
	30	0.10	10.0
EXAMPLE 1-3	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 1-4	5	0.0	8.0
	15	0.0	8.0
	30	0.0	9.0
EXAMPLE 1-5	5	0.0	6.0
	15	0.0	6.0
	30	0.0	7.0
EXAMPLE 1-6	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 1-7	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
COMPARATIVE EXAMPLE 1-1	5	2.6	10.0
	15	2.3	10.0
	30	2.0	10.0

FIG.23

	SIDE-RUNOUT WHEN ADJUSTMENTS OF PUSHING AMOUNT AND TILT ANGLE OF MAIN STABILIZING MEMBER ARE OPTIMIZED [μ m]
EXAMPLE 1-1	4.0
EXAMPLE 1-2	4.0
EXAMPLE 1-3	3.0
EXAMPLE 1-4	3.0
EXAMPLE 1-5	3.0
EXAMPLE 1-6	3.0
EXAMPLE 1-7	3.0
COMPARATIVE EXAMPLE 1-1	5.0

FIG.24

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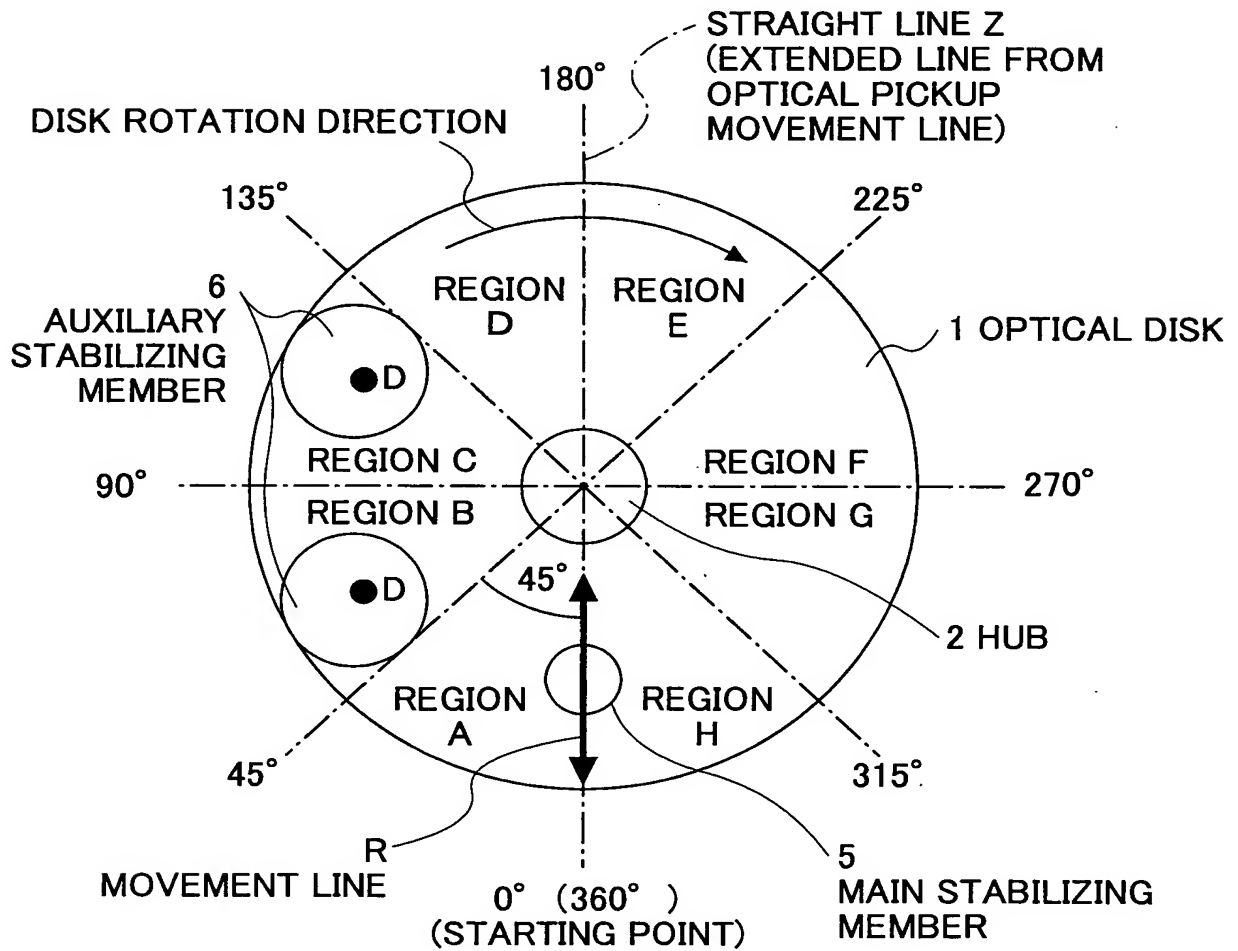


FIG.25

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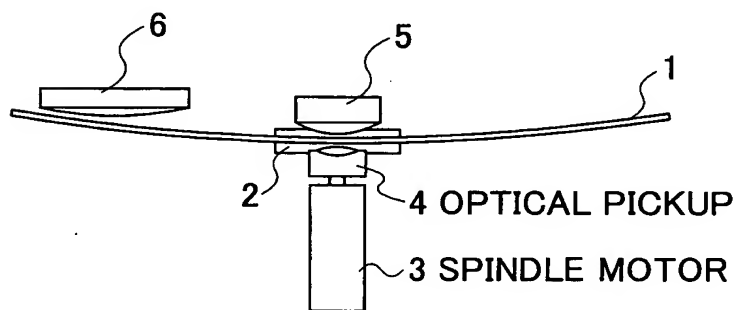


FIG.26

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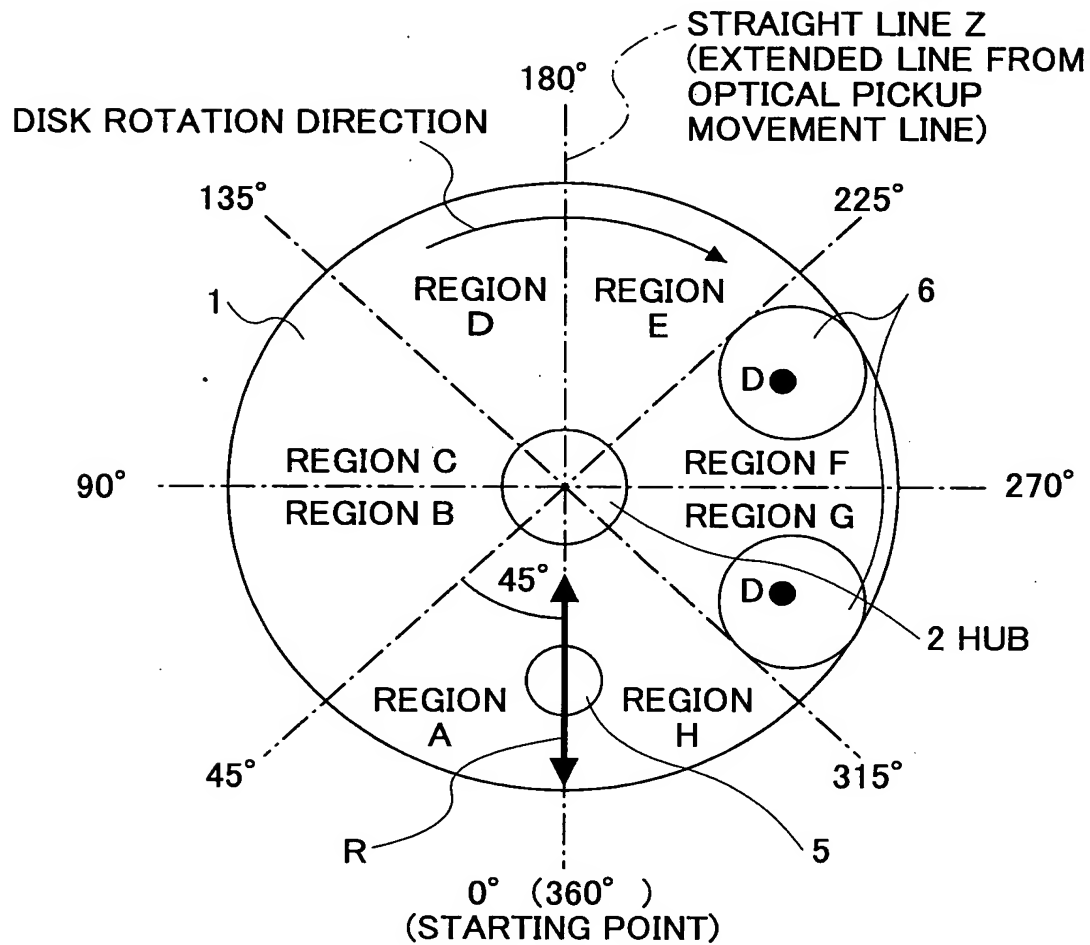
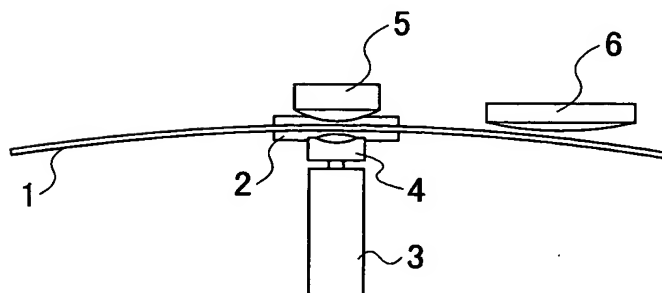
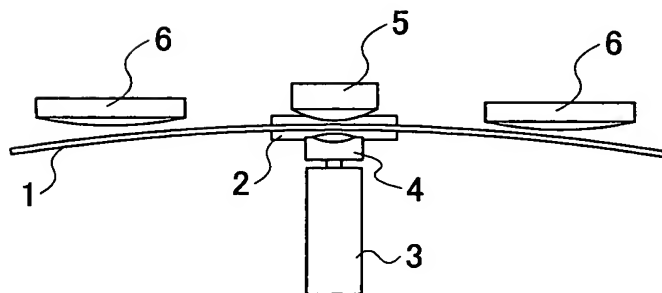


FIG.27

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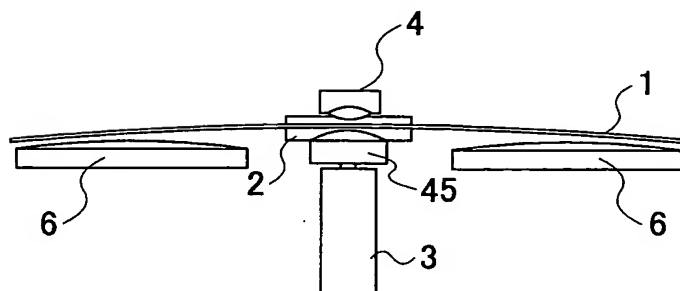


FIG. 32

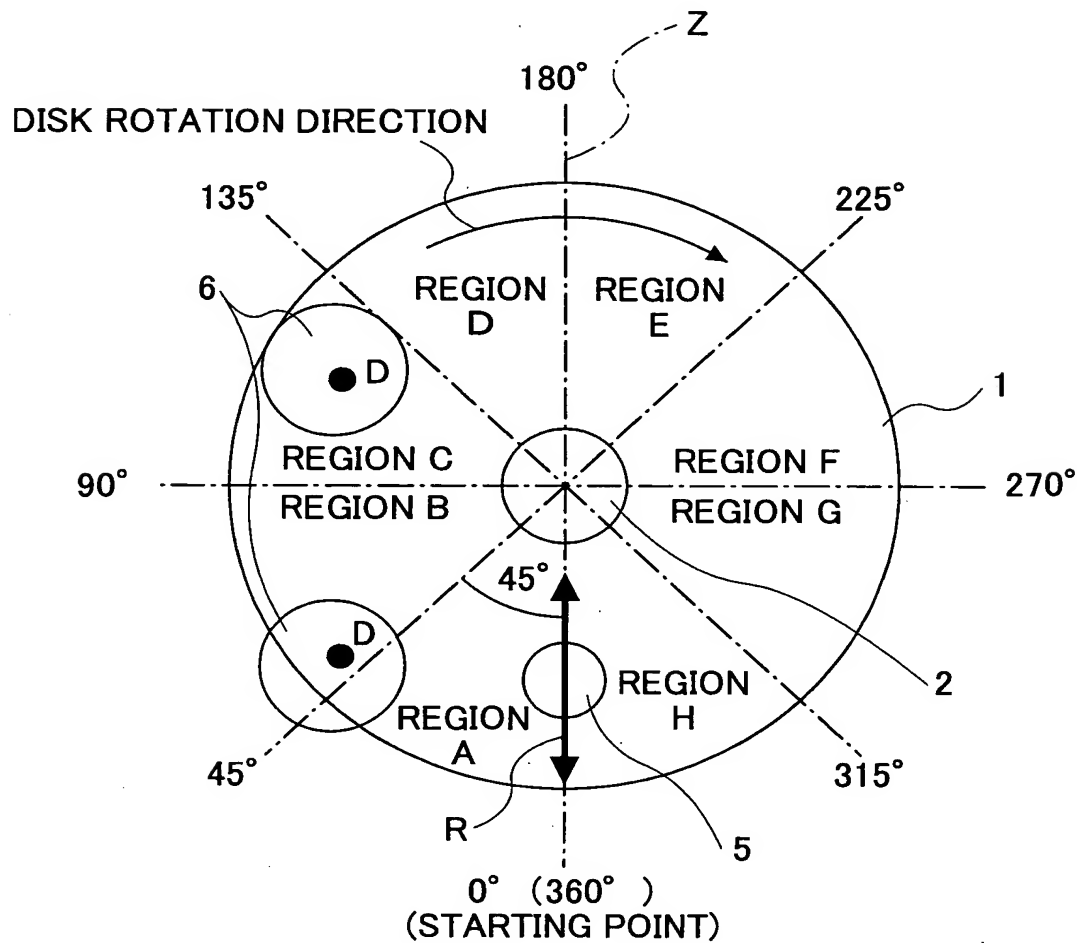


FIG.33

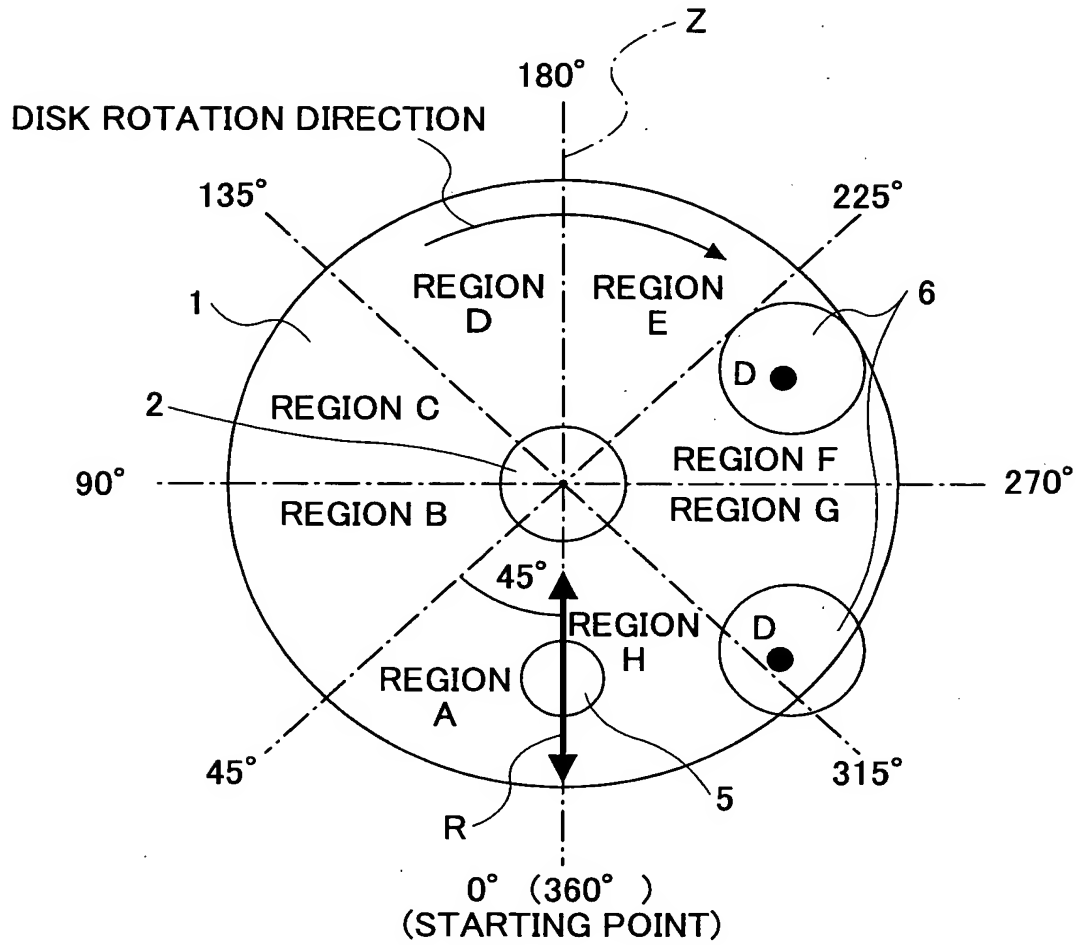


FIG.34

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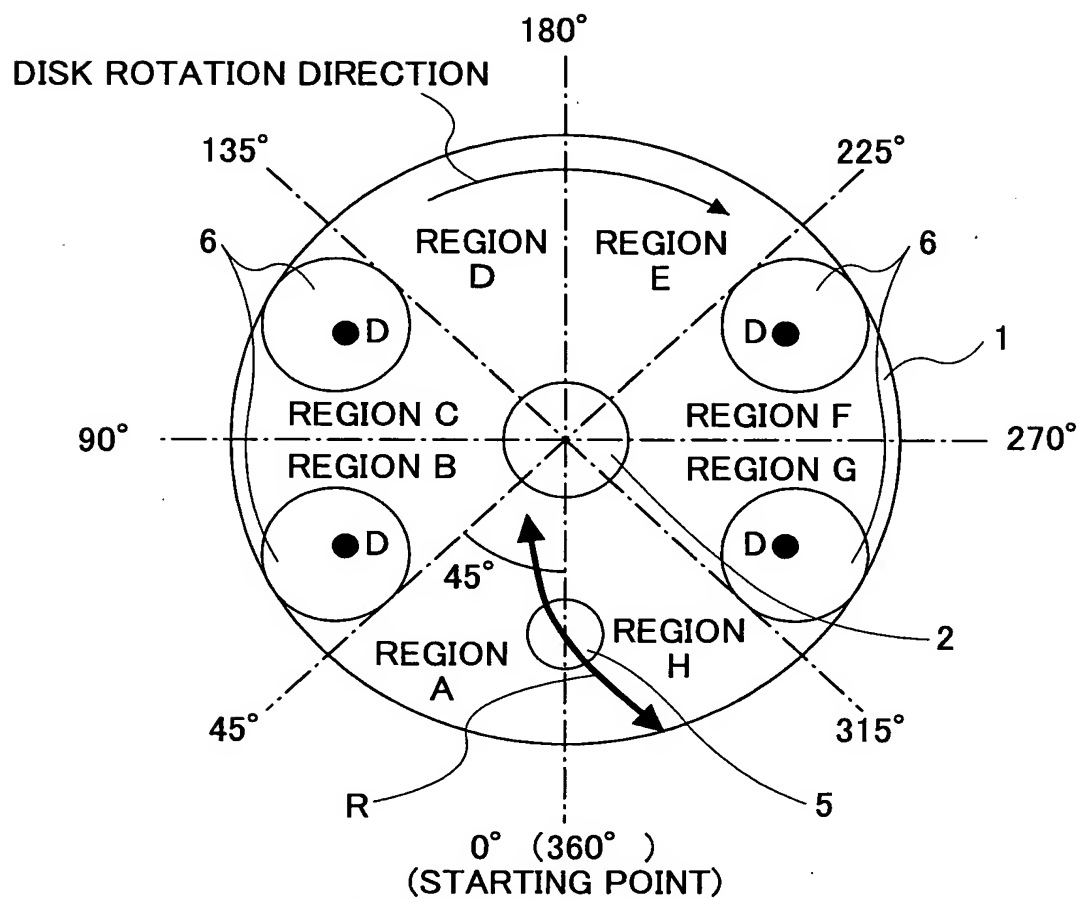


FIG.35

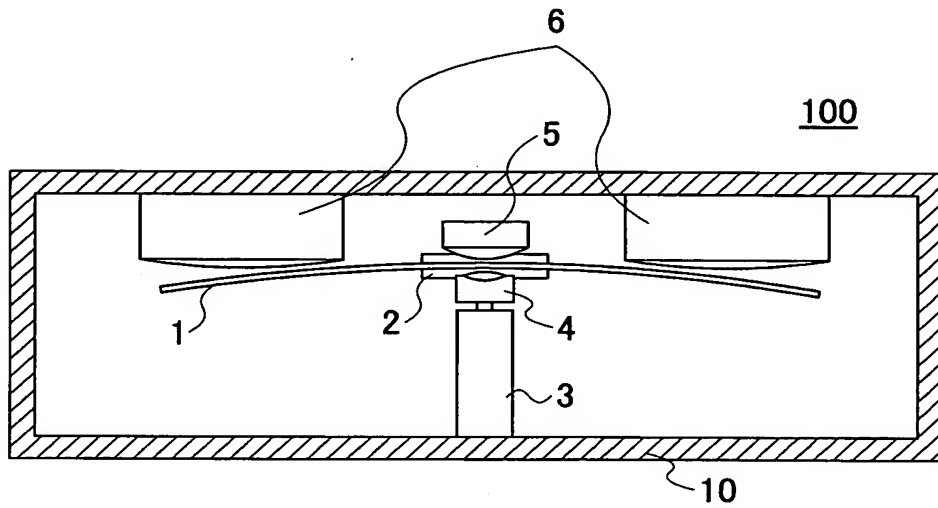


FIG.36

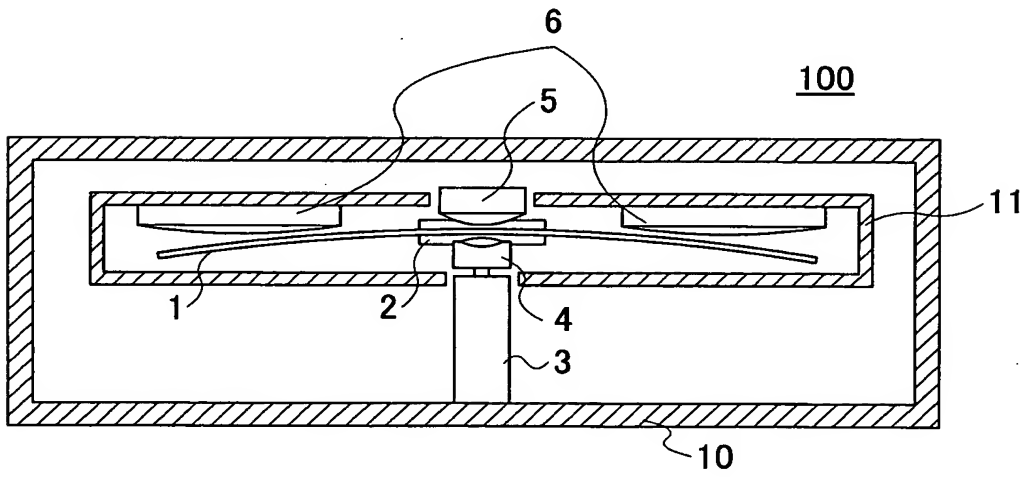


FIG.37

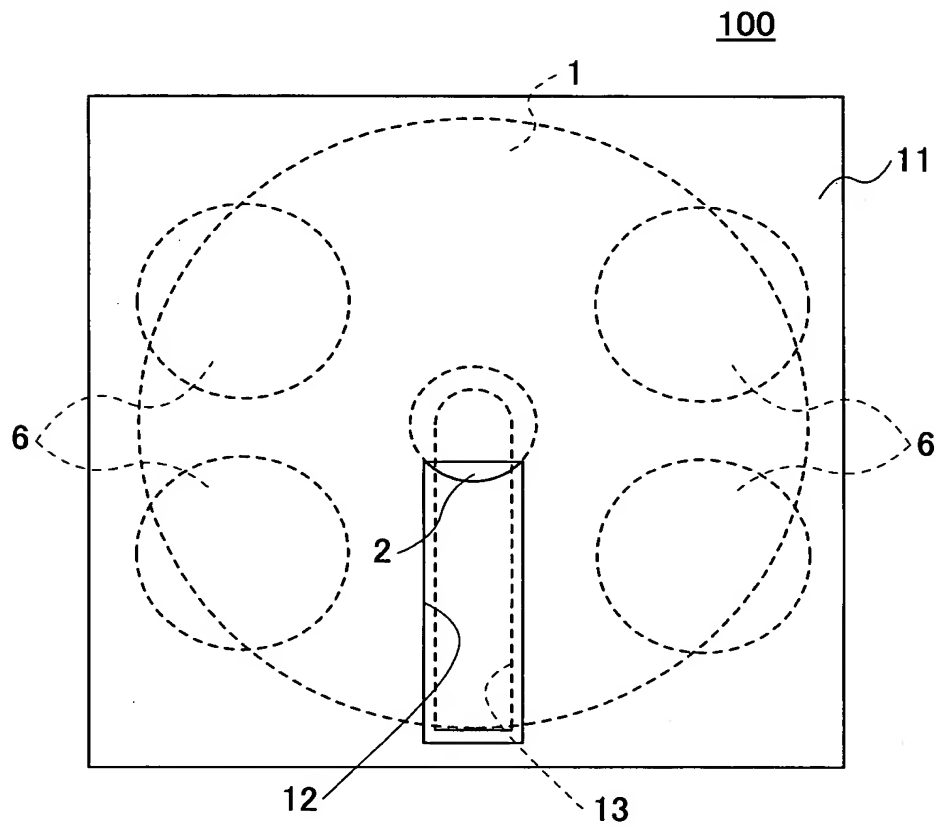


FIG.38

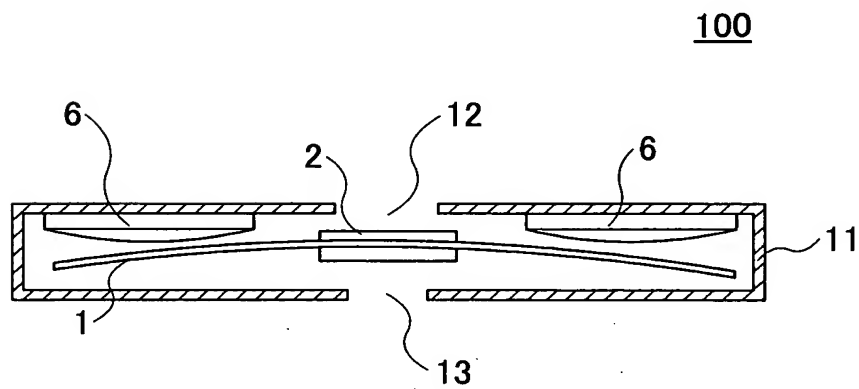


FIG.40

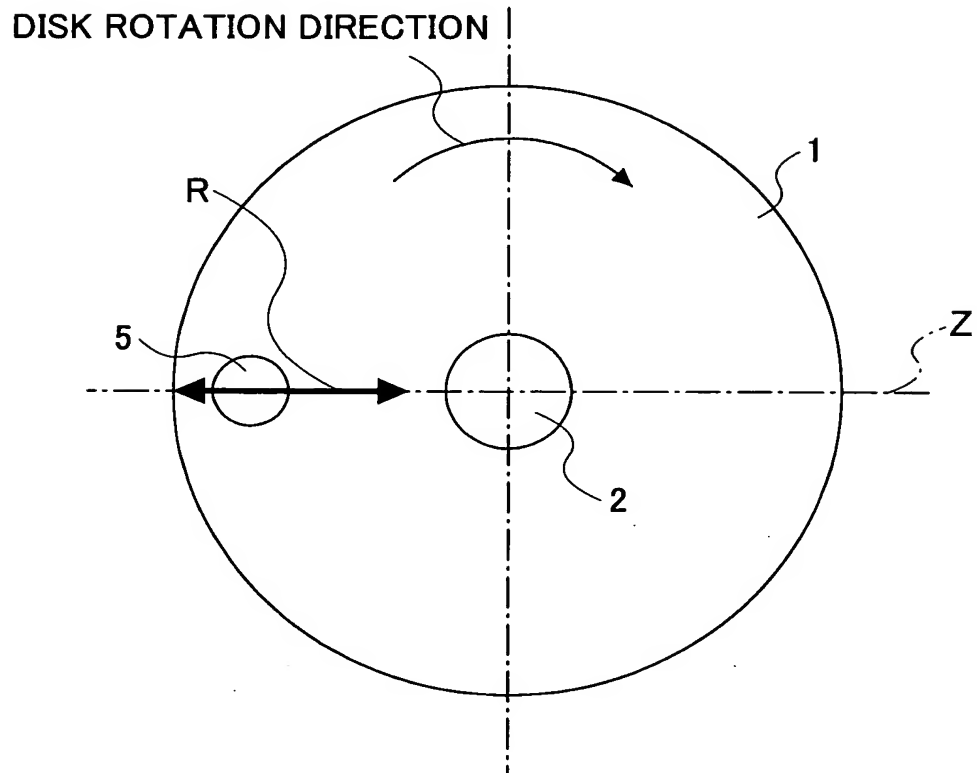


FIG.41

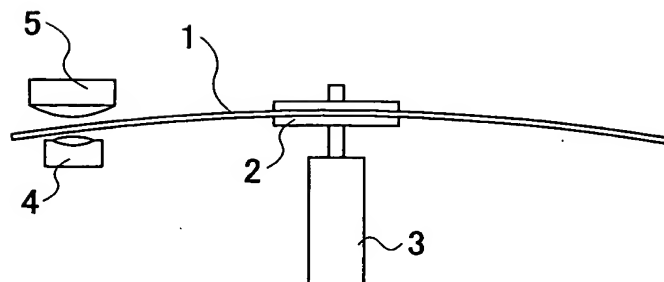


FIG.42

	LINEAR SPEED [m/sec]	REQUIRED PUSHING AMOUNT OF MAIN STABILIZING MEMBER TO REDUCE SIDE-RUNOUT LOWER THAN 10 MICRON (AT LOCATION OF r55mm)	SIDE-RUNOUT BY PUSHING AMOUNT [micron]
EXAMPLE 2-1	5	0.15	10.0
	15	0.10	10.0
	30	0.05	10.0
EXAMPLE 2-2	5	0.15	10.0
	15	0.10	10.0
	30	0.05	10.0
EXAMPLE 2-3	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
EXAMPLE 2-4	5	0.0	8.0
	15	0.0	8.0
	30	0.0	9.0
EXAMPLE 2-5	5	0.0	6.0
	15	0.0	6.0
	30	0.0	7.0
EXAMPLE 2-6	5	0.0	7.0
	15	0.0	7.0
	30	0.0	8.0
COMPARATIVE EXAMPLE 2-1	5	2.6	10.0
	15	2.3	10.0
	30	2.0	10.0

FIG.43

	SIDE-RUNOUT WHEN ADJUSTMENTS OF PUSHING AMOUNT AND TILT ANGLE OF MAIN STABILIZING MEMBER ARE OPTIMIZED [micron]
EXAMPLE 2-1	4.0
EXAMPLE 2-2	4.0
EXAMPLE 2-3	3.0
EXAMPLE 2-4	3.0
EXAMPLE 2-5	3.0
EXAMPLE 2-6	3.0
COMPARATIVE EXAMPLE 2-1	5.0

FIG.44

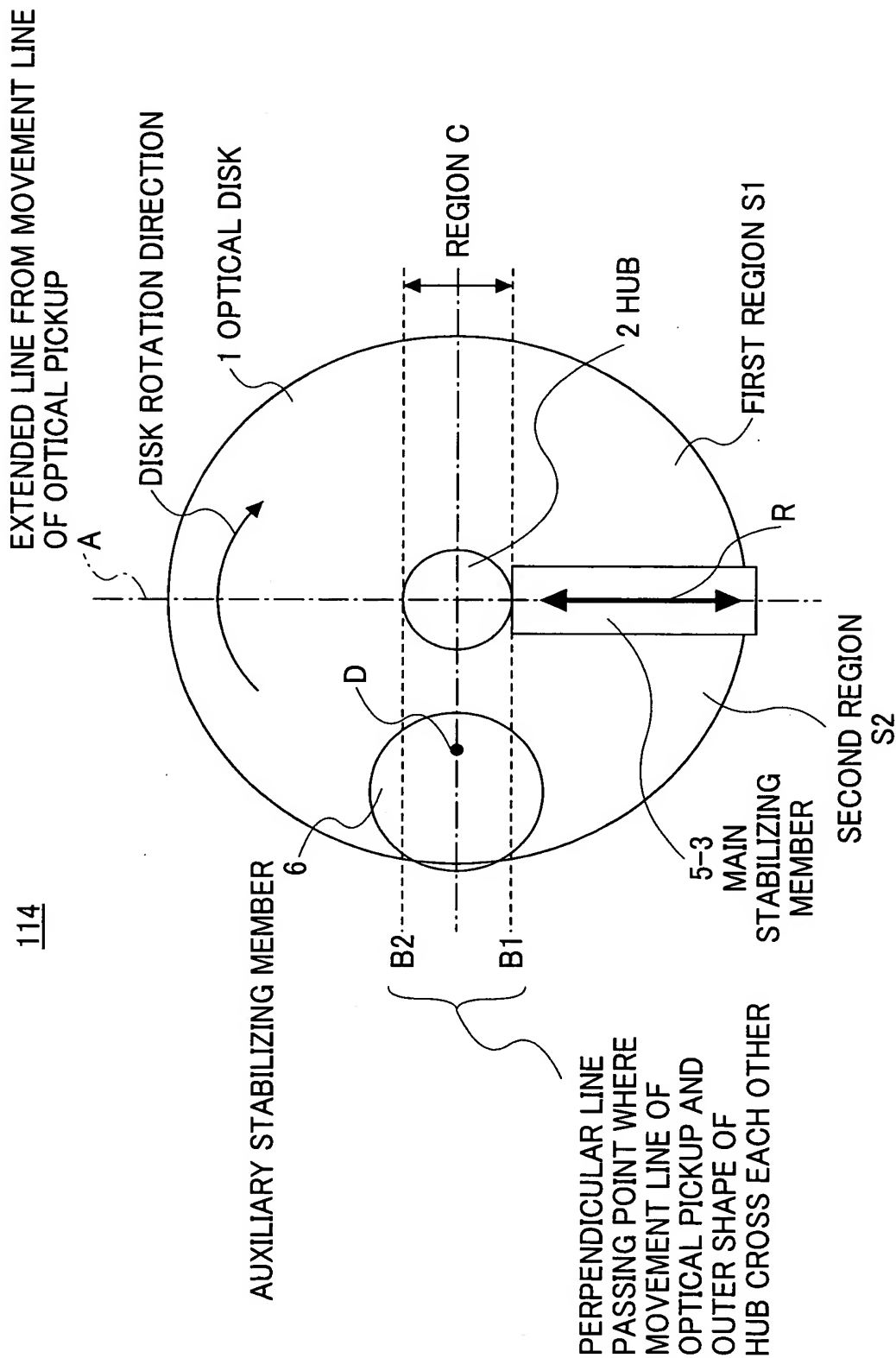


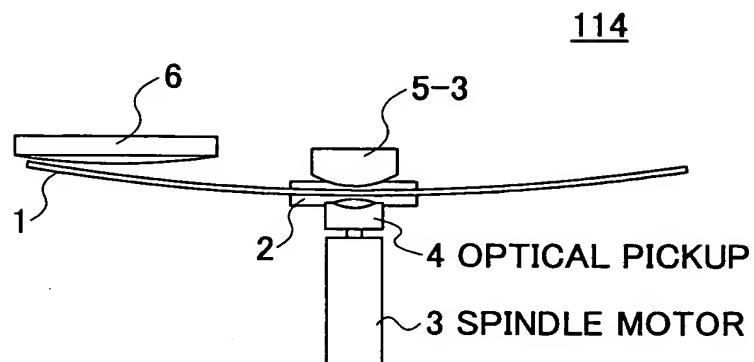
FIG.45

FIG.46

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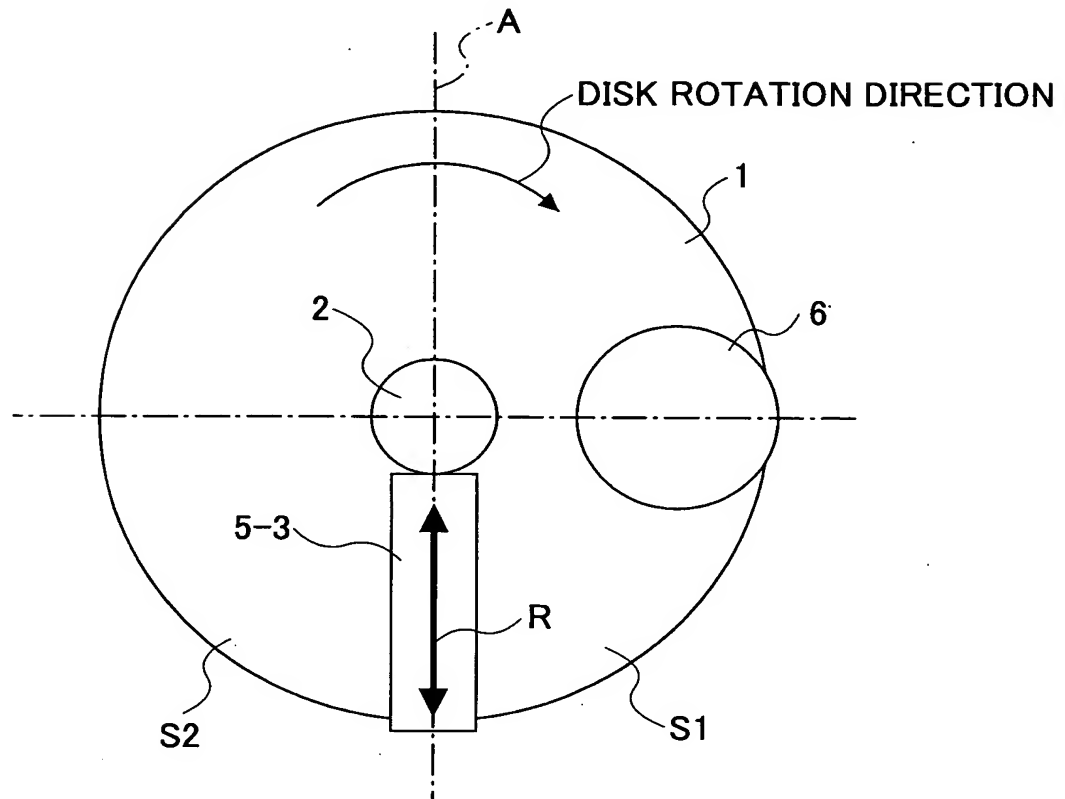


FIG.47

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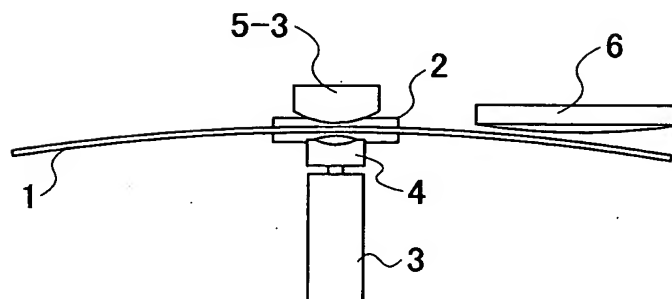


FIG.48

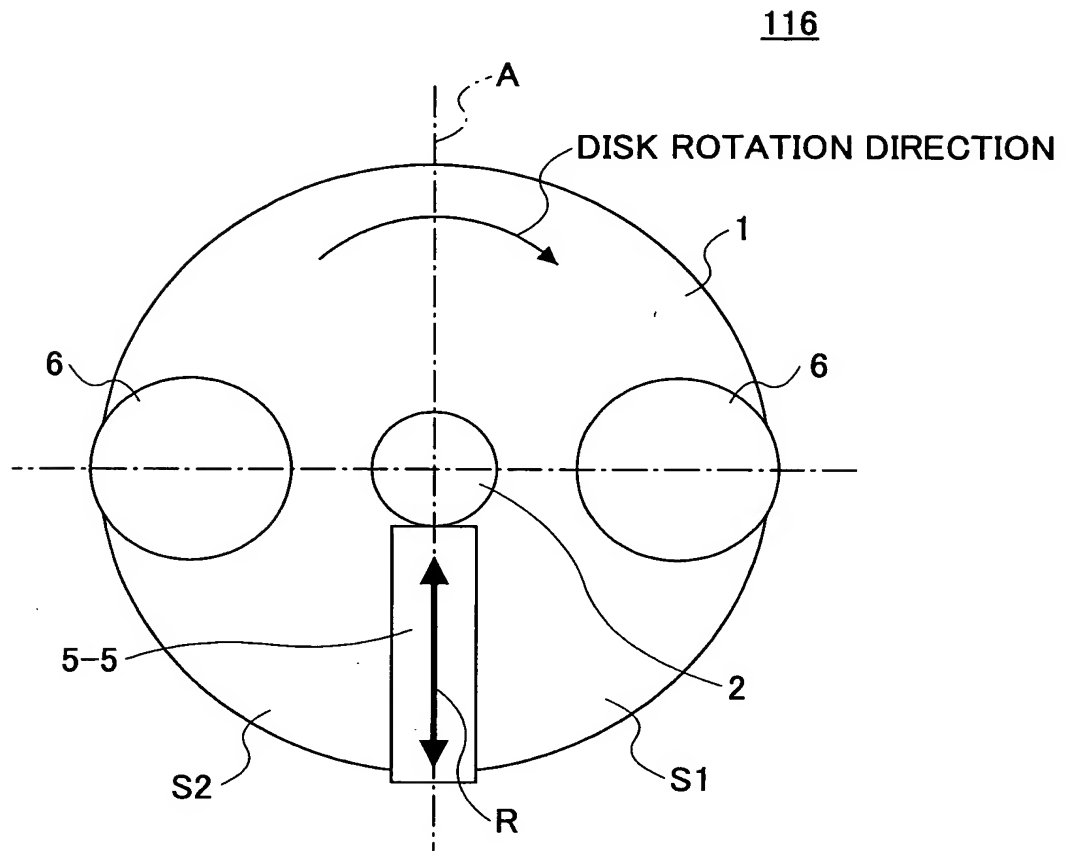


FIG.49

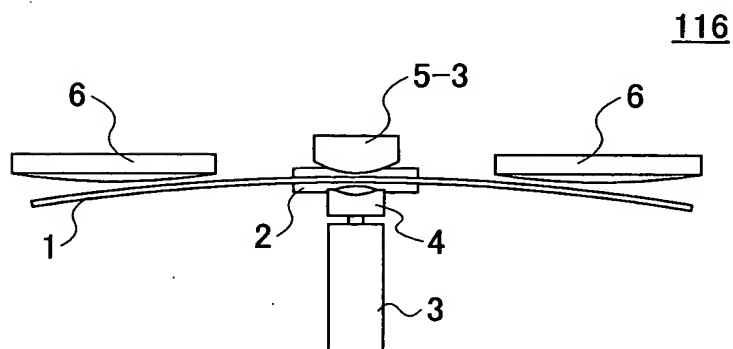


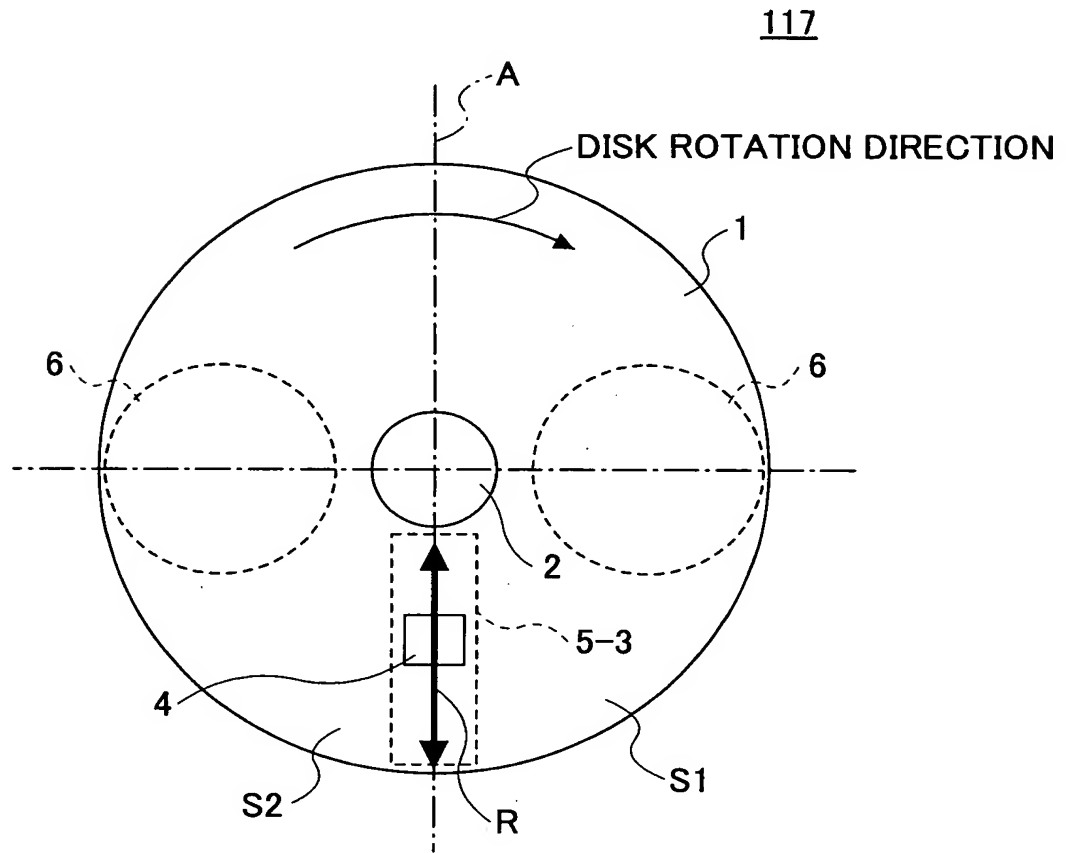
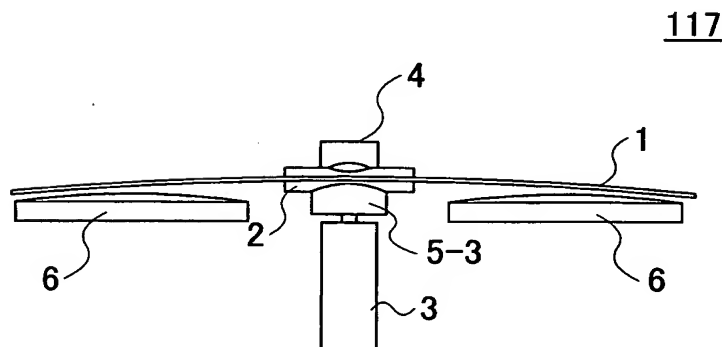
FIG.50**FIG.51**

FIG.52

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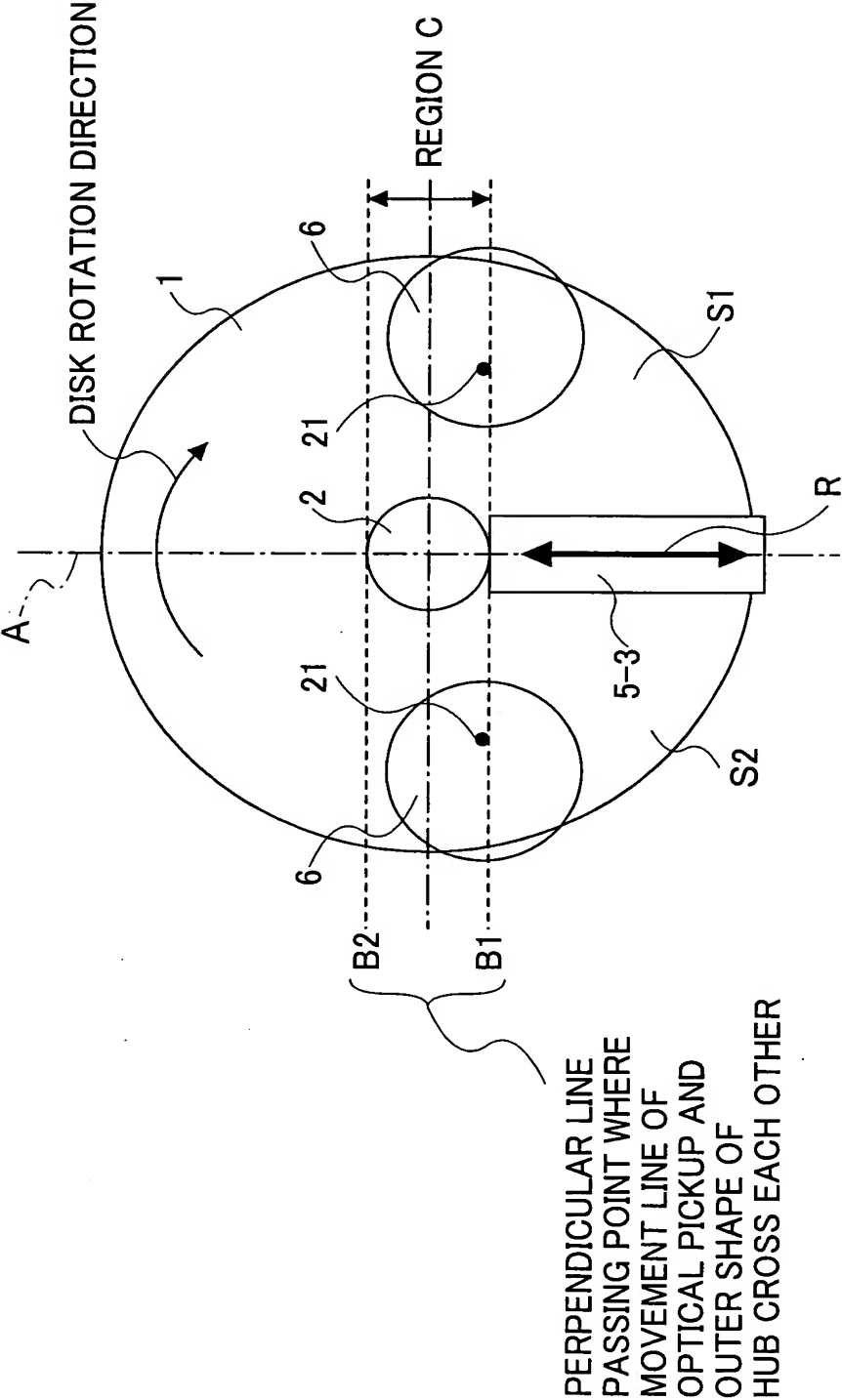


FIG.53

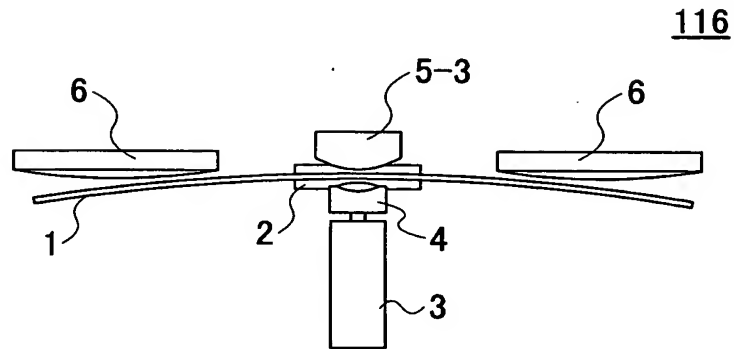


FIG.54

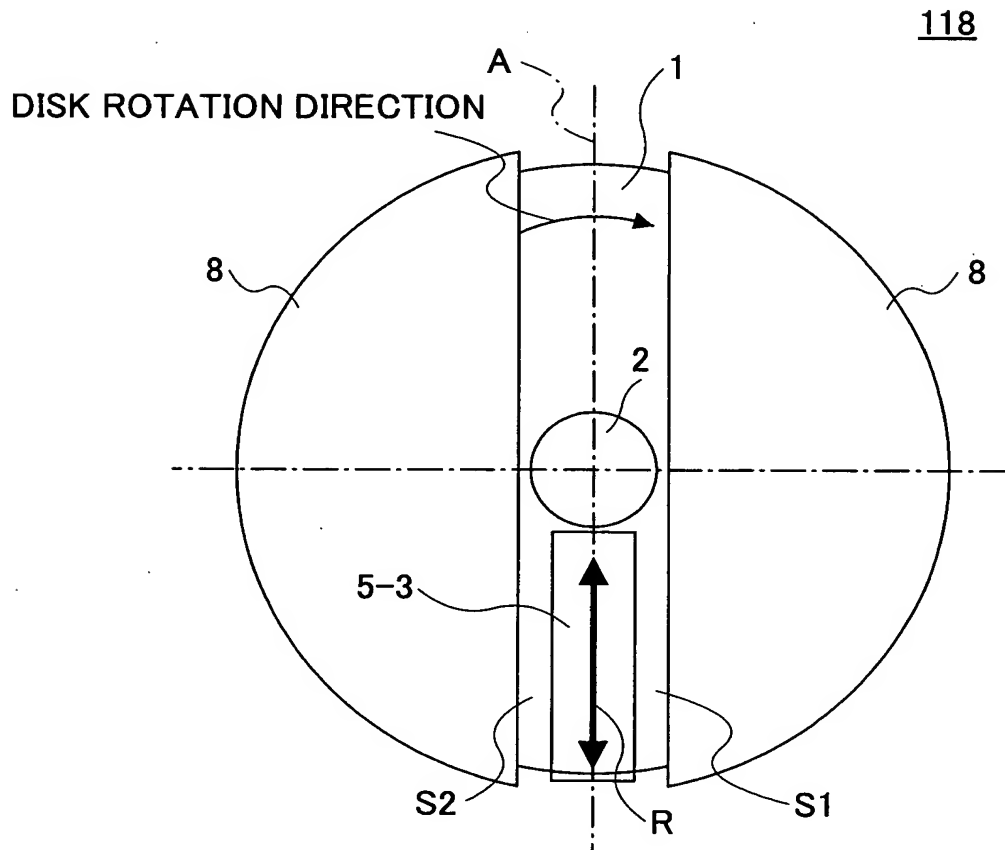


FIG.55

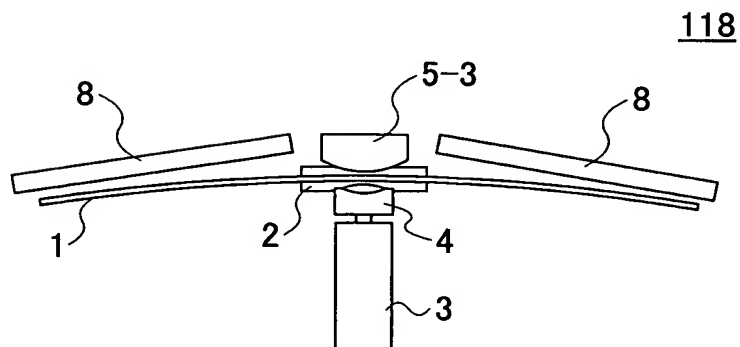


FIG.56

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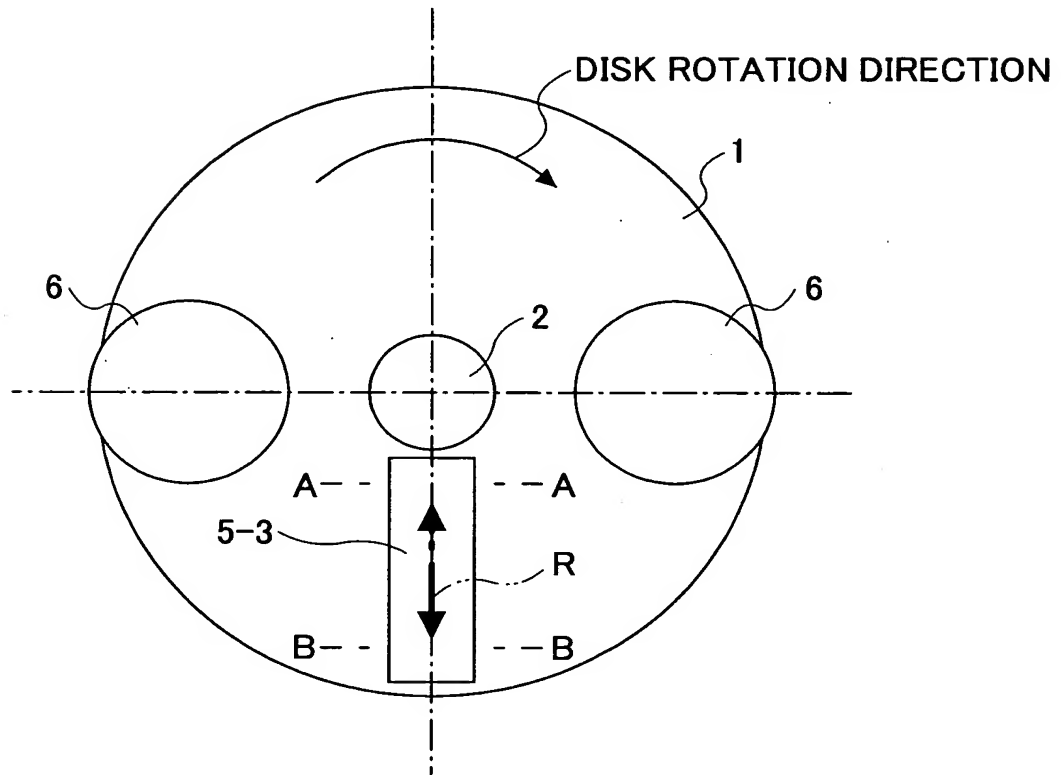


FIG.57A

FIG.57B

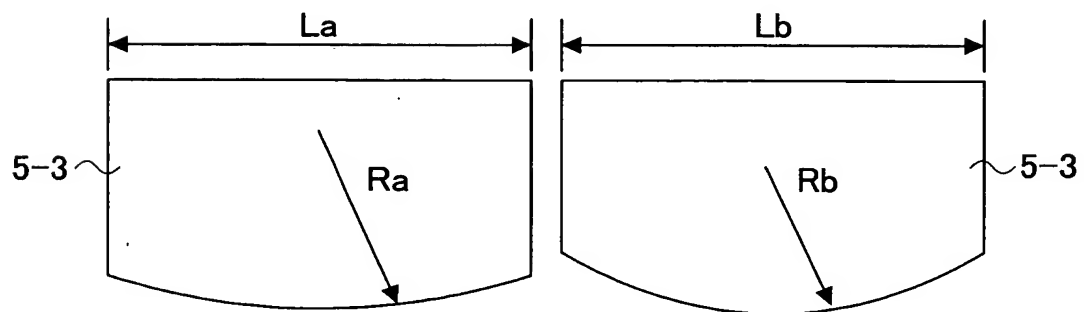


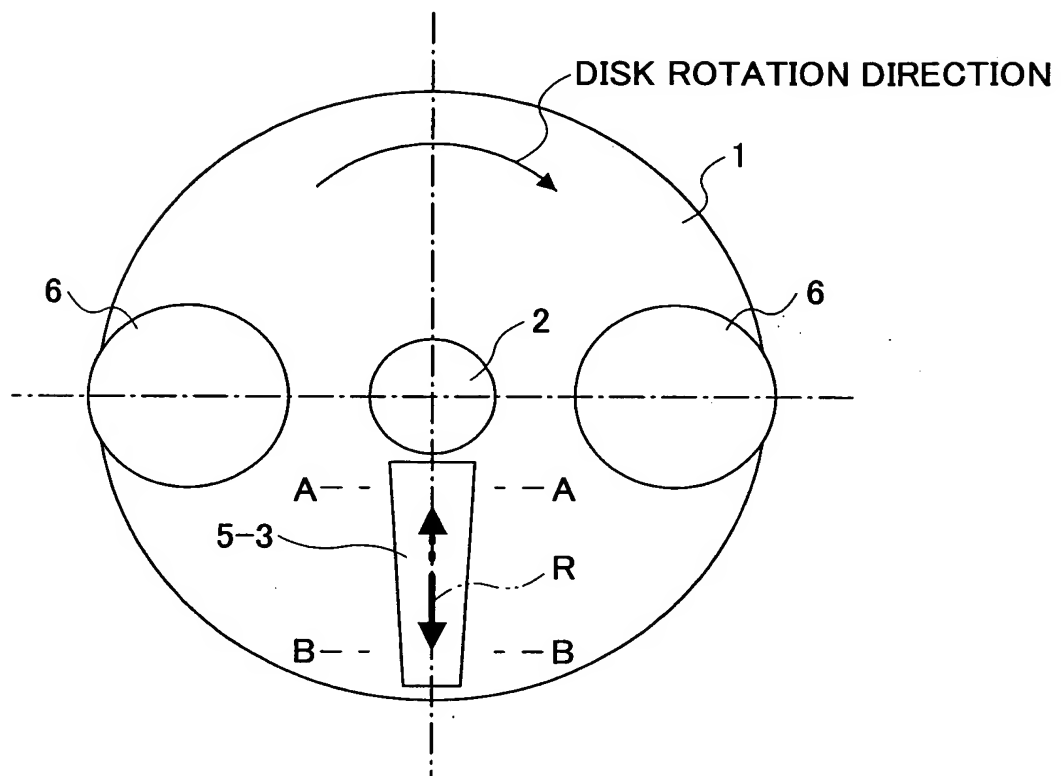
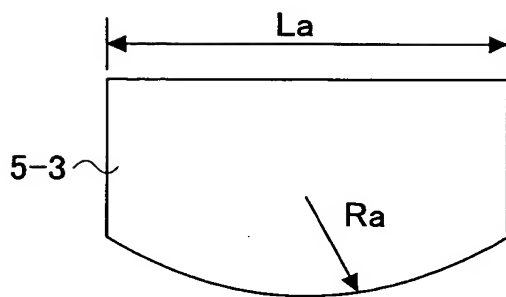
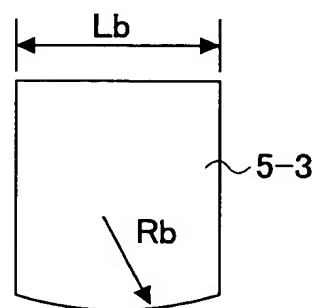
FIG.58120**FIG.59A****FIG.59B**

FIG.60

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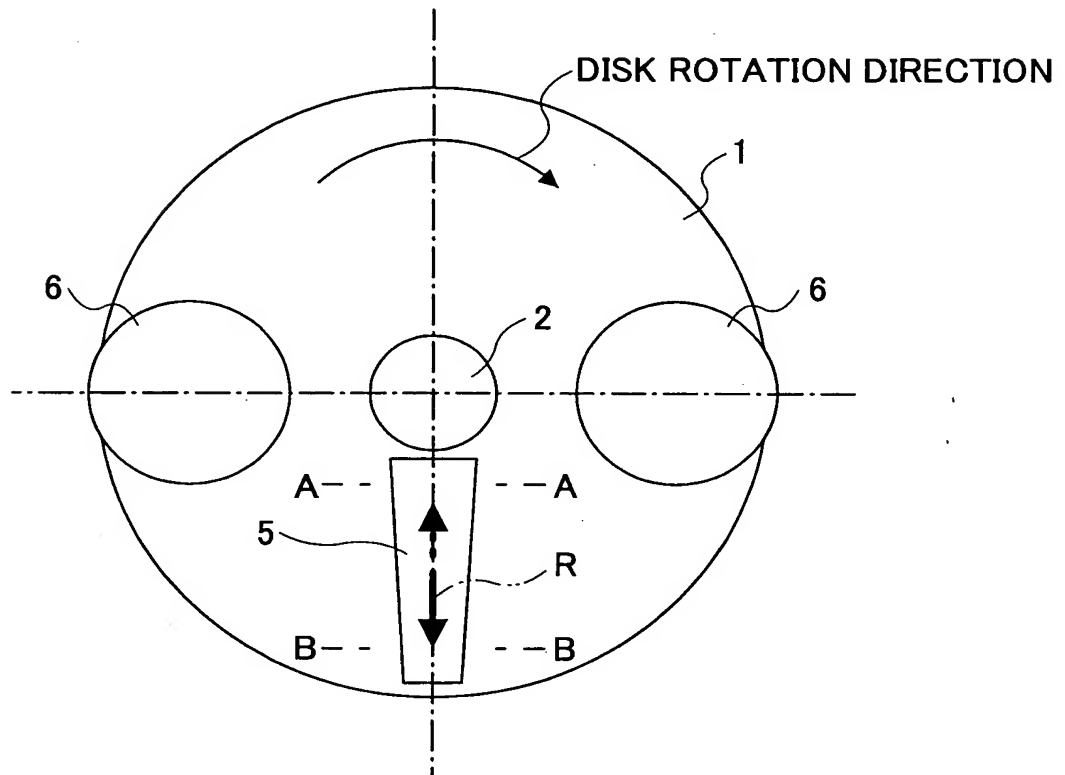


FIG.61A

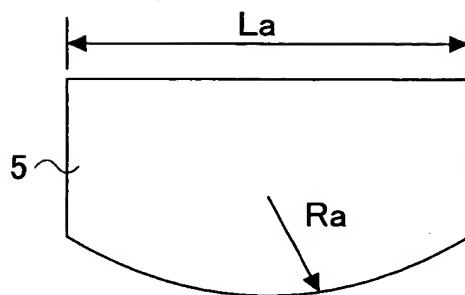


FIG.61B

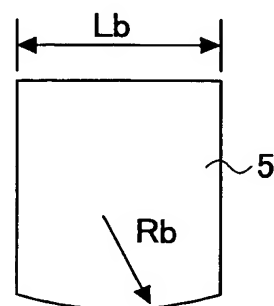


FIG.62

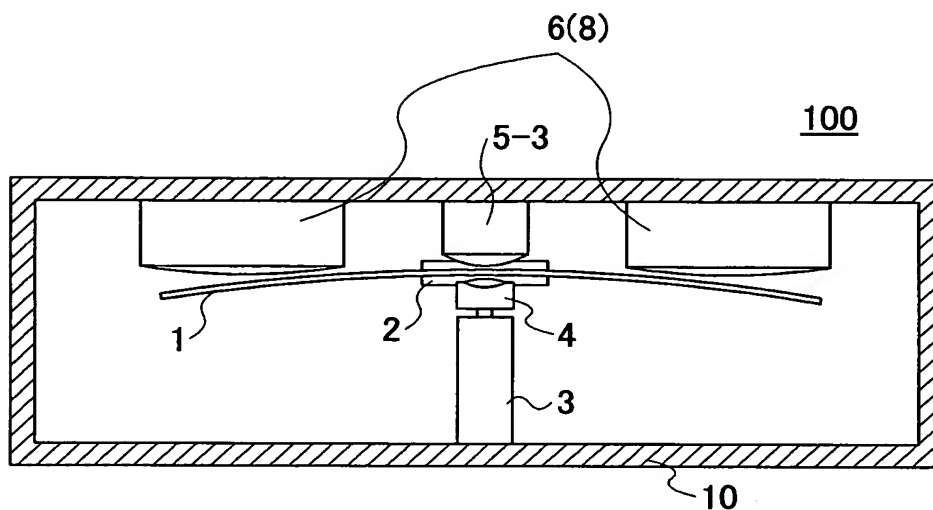


FIG.63

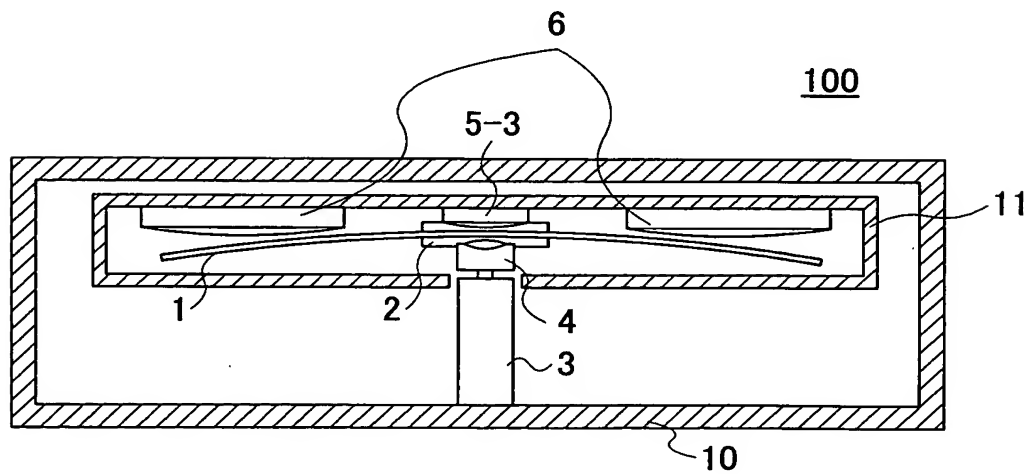


FIG.64

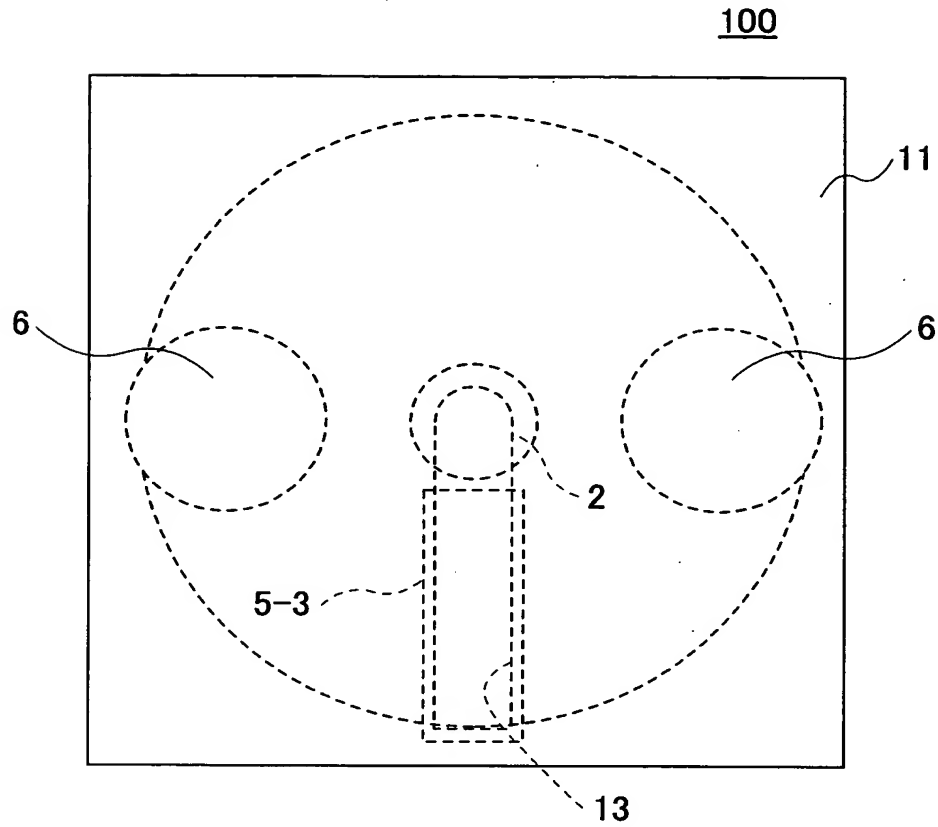


FIG.65

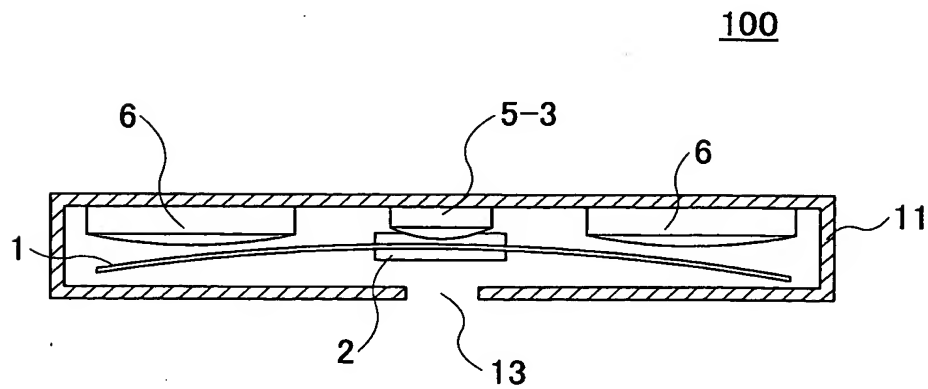


FIG.66

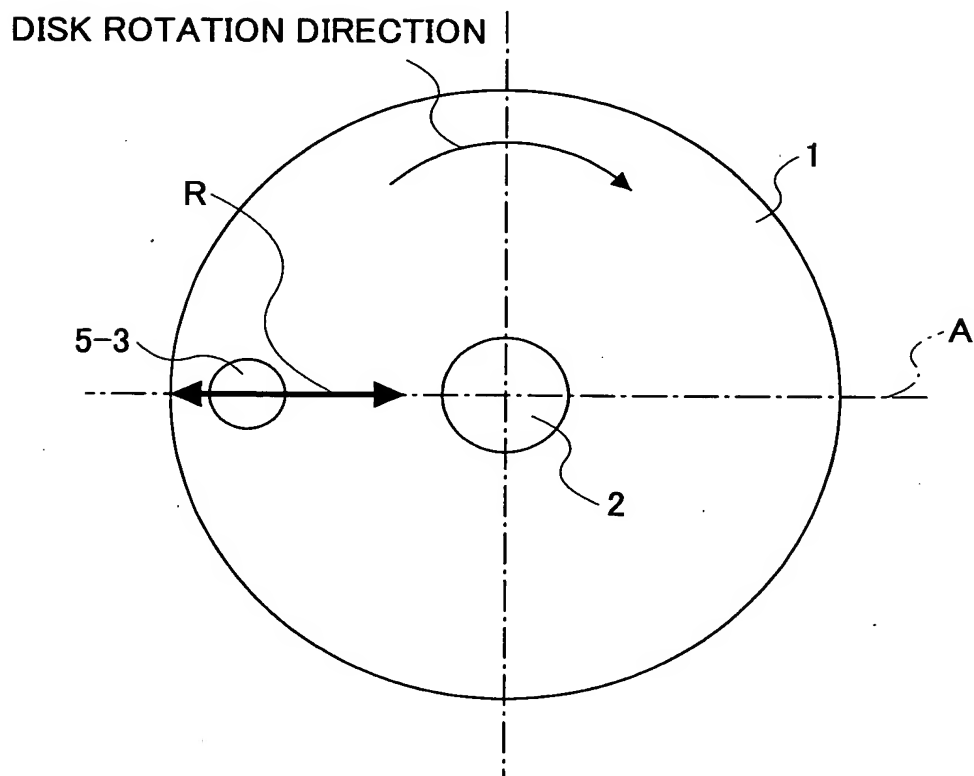


FIG.67

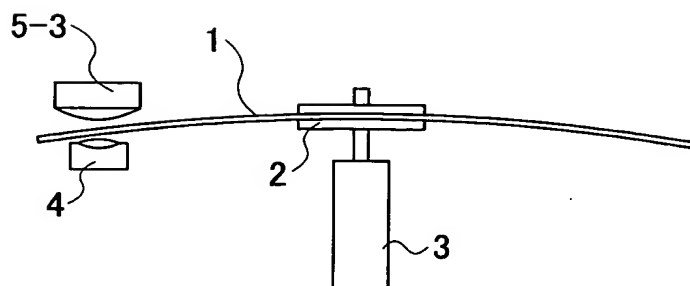


FIG.68

	SIDE-RUNOUT AMOUNT [μ m]		
	LOCATION OF RADIUS 25mm	LOCATION OF RADIUS 40mm	LOCATION OF RADIUS 58mm
EMBODIMENT 14	8	10	12
EMBODIMENT 15	8	8	8
EMBODIMENT 16	8	8	8
EMBODIMENT 17	8	8	8
EMBODIMENT 18	7	7	7
EMBODIMENT 19	8	8	8
CONPARATIVE EXAMPLE 1	30	40	50
CONPARATIVE EXAMPLE 1	6	7	5